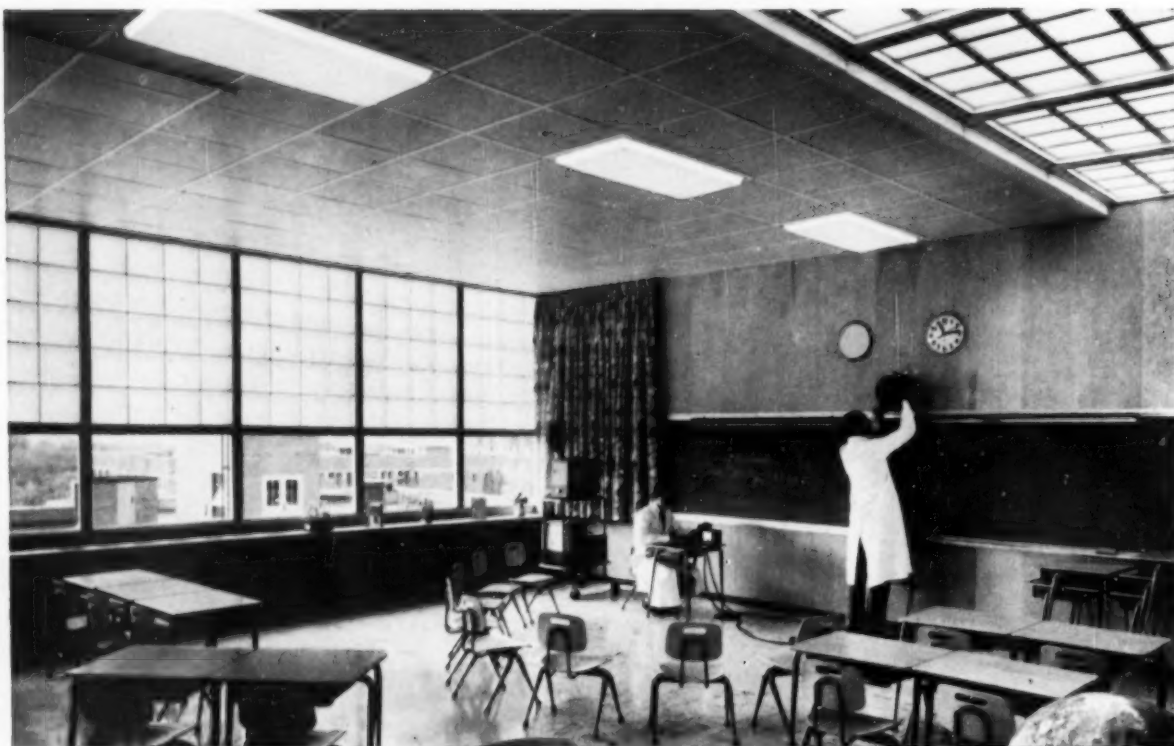




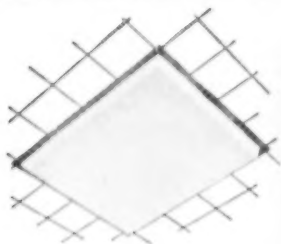
College AND UNIVERSITY Business

**FEBRUARY 1954: Corporation Philanthropy • The Professor and
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Purchasing Procedure Pays Off • Custodial Training Program**



Research Laboratory Classroom, Daylighting Laboratory, University of Michigan, Sponsored by Owens-Illinois Glass Co.

Wakefield Beta-Plex Ceiling Units Are Used To Supplement Daylighting in "Classroom of Tomorrow"

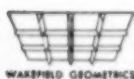


Beta-Plex is a complete unit ready for recess mounting in a suspended ceiling. Ballasts and lampholders are contained in a metal housing. A Touch-Latch releases and closes the Rigid-Arch Plexiglas diffuser, making the interior of a Beta-Plex unit readily accessible. Four sizes: 2' x 2', 2' x 4', 1' x 4' and 4' x 4'.

On dark days, when daylight falls below the minimum requirements, supplementary electric lighting is provided automatically by Wakefield Beta-Plex units controlled by a photo cell. Beta-Plex units were not chosen for "the classroom of tomorrow" by accident. They were chosen because, when unlighted, they have an exclusive non-specular matt finish which breaks up the light component from the prismatic glass block, preventing reflected glare.

The photo shows three (of four) 2' x 4' recessed Beta-Plex units mounted almost in the center of the ceiling, under which the low point of daylight falls. For schools whose classrooms are used at night, a different arrangement of Beta-Plex units is recommended, with separate circuits and switches to permit full (night) or partial (day) use. For an illustrated, descriptive 8-page folder on Beta-Plex, write to The F. W. Wakefield Brass Company, Vermilion, Ohio. In Canada: Wakefield Lighting Limited, London, Ontario.

Wakefield Over-ALL Lighting



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*Typical business office reception room
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ideas

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food service
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eliminating waste motion

at Statler Hall, Cornell University



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View of bake shop in main kitchen, showing stainless steel bakers' tables with portable bins underneath. Here is an example of equipment designed to save time and facilitate cleaning. Bins are wheeled directly to supply section and filled with ingredients. Rehandling is avoided—waste motion eliminated. Since there is no fixed enclosure, there are no hiding places for vermin. With bins removed, the entire area beneath table is easily accessible for cleaning.

PORTABLE BANQUET TABLES PERMIT FLEXIBILITY OF SERVICE

View shows mobile banquet tables and food-warming cabinet in background, main kitchen. Food is loaded into tables and wheeled directly to serving area. Tables are then placed in position for most efficient service, depending upon load in banquet hall. All-welded, stainless steel construction assures a high degree of sanitation and long service life.

● This prominent educational institution emphasizes the scientific approach to hotel and restaurant management. Students are taught the newest techniques. They become familiar with a variety of modern equipment, chosen for its sanitary and durable qualities. Proper planning has resulted in the saving of time and labor and elimination of waste motion. In this award-winning installation there was a problem of integrating students' work areas with the main kitchen. It was solved by careful arrangement of equipment to permit smooth and efficient functioning. If you have a mass feeding problem, you can increase operating efficiency and lower maintenance costs by installing Blickman-Built food service equipment.



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Vol. 16, No. 2, February 1954

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Among the Authors



John R. Richards

JOHN R. RICHARDS, vice chancellor of the Oregon State System of Higher Education, suggests on page 19 many factors that should be seriously considered by colleges that solicit gifts from corporations. He reviews both the opportunities of such a program and the limitations, and proposes exhaustive study of the subject before an institution commits itself to such a program. Prior to accepting his present position last July, Mr. Richards was director of the office of research service at New York University. From 1951 until his appointment to the N.Y.U. staff he had been special assistant for education to the Secretary of the Army, and in 1946 was special assistant to the deputy administrator of the Office of Price Administration. At one time, he served as executive assistant to the president of Wayne University, Detroit. . . . ROGER M. GAARDER, assistant director of the personnel department of San Joaquin County, California, reports on page 22 the results of a statewide salary survey in order to suggest to colleges and universities the possibilities of comparing their own salary scales with those of other employed groups. Mr. Gaarder has been in the personnel field since graduation from the University of Minnesota. Before accepting his present position two years ago, he was personnel assistant at the University of Minnesota.



R. H. Collacott

R. H. COLLACOTT, assistant to the chairman of the board of directors of the Standard Oil Company of Ohio, discusses on page 26 the matter of corporate giving in colleges from the industrialist's point of view. The Standard Oil Company of Ohio has been active in the Ohio Association of Independent Colleges and, out of that experience, Mr. Collacott suggests some responsibilities faced by industrialists in planning their corporate giving in support of higher education. Mr. Collacott has been with the Standard Oil Company since 1920.



Joseph P. Leverone

JOSEPH P. LEVERONE, custodial superintendent of the University of Minnesota, describes in detail on page 46 the job analysis program established there to determine work load for personnel. At the university he is responsible for the custodial division at both Minneapolis and St. Paul campuses, and handles the physical plant responsibilities at university functions and athletic events from the service standpoint. Before accepting his present post, Mr. Leverone was production control manager at the Speery Corporation at St. Paul.

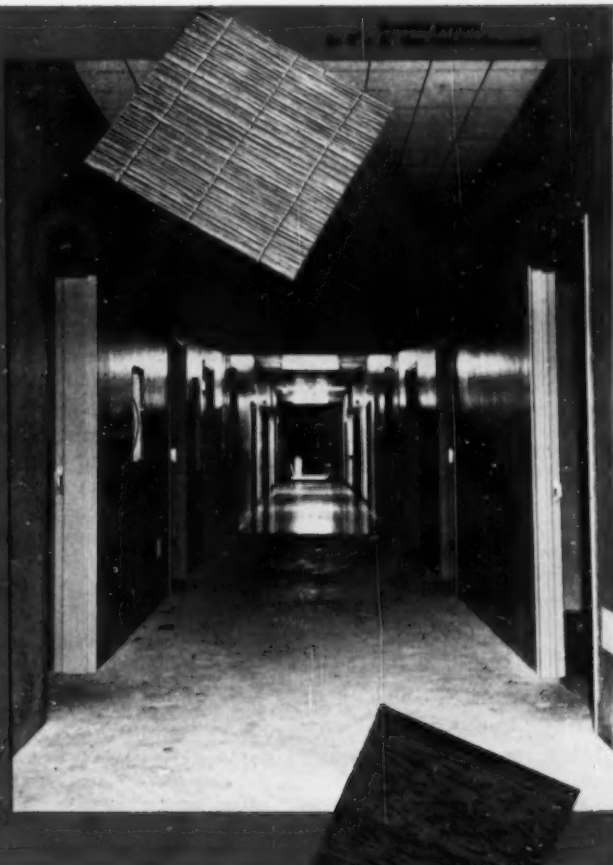


Robert E. Ohlzen

ROBERT E. OHLZEN, buyer in the department of purchases of the Chicago Board of Education, describes the savings that resulted from the consolidation of purchasing practices in the food service departments of the Chicago schools. He has spent most of his career in the field of institutional purchasing and was assistant purchasing agent for the Chicago division of the University of Illinois for six years before accepting his present appointment three years ago. A study specialty of his has been the utilization of precut frozen meats for institutional use.

Bolta-Wall installation at Sater Hospital, Austin, Texas, shows handsome Leathergrain Pattern on corridor walls. Bolta-Wall was chosen for use throughout this hospital for its ability to resist stains, scuffs and scratches while retaining its fresh beauty.

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Questions and Answers

Medical Expenses

Question: Should medical expenses and/or hospitalization be paid by the institution for officers or other personnel traveling on institutional business?—S.H.M., N.Y.

ANSWER NO. 1: It is my opinion that if some circumstance of the trip itself caused the illness or accident that necessitated medical or hospital care the expense of it should be charged to the trip. However, if an officer or other employee suffers an attack of appendicitis requiring surgery or hospitalization while away from home on institutional business, I doubt if any compensation court would or should rule that it was an occupational hazard.

We have followed the practice of actually purchasing trip-accident insurance policies for our employees when they travel on authorized business missions. We accept no further responsibility.—CHARLES HOFF, vice president, University of Omaha.

ANSWER NO. 2: It is assumed that in the situation from which this question originates, the medical expenses and/or hospitalization of employees in general are not paid by the institution. As to whether an exception should be made in favor of officers and other personnel while traveling on institutional business, I can see no more reason for paying these expenses while traveling than at other times, and for other employees.

When employment arrangements are made, certainly the employee understands what his responsibilities—perhaps including travel—are to be and the salary should be commensurate with these responsibilities. In most situations, practical difficulties would seem to arise in administering fairly a policy calling for the payment of medical expenses or hospitalization for employees while traveling. Travel might involve anything from a day's automobile trip to a near-by town to a month's trip to a foreign country. Except in time of exposure, one might

be just as hazardous as the other. What travel would be covered?

A policy of nonpayment of these expenses does not necessarily preclude special arrangements for protecting employees, such as research staff members who might be required to travel in hazardous parts of the world, from major catastrophes to which they might be exposed because of climate and other factors.—H. R. PATTON, controller, Carnegie Institute of Technology.

Prevent Students' Charging

Question: What safeguards can a college set up to prevent student organization officers from charging purchases to the college?—R.D., Calif.

ANSWER: We have set up a student organization requisition and purchase order form that we require the authorized representative of every student organization to use. This may be used as a direct purchase order on a vendor or may be used as a requisition to be sent to the purchasing department, which will then issue a purchase order to a vendor. This requisition to be valid must be properly countersigned by the student organization central office. This form is used as a direct purchase order in dealing with vendors with which the university purchasing department does not normally deal, such as retail stores.

If you have a question on business or departmental administration that you would like to have answered, send your query to COLLEGE and UNIVERSITY BUSINESS, 919 North Michigan Avenue, Chicago 11, Ill. Questions will be forwarded to leaders in appropriate college and university fields for authoritative replies. Answers will be published in forthcoming issues. No answers will be handled through correspondence.

For this procedure to be successful, it involves continual education of the students as to proper procedure. Also, we infer to the student that any unauthorized bills will not be paid. We pay such bills only after considerable delay, encouraging them by such pressure to follow the correct procedure. Furthermore, we notify all vendors with whom the university regularly does business and all other vendors that we think the students may use that no bills will be honored by the university unless they have either a student organization purchase order or university purchase order. Control of vendors is sometimes more effective than control of students.

We have succeeded in educating student organizations and vendors so that this procedure is now effective, although I doubt that any such system can be 100 per cent successful.—D. FRANCIS FINN, purchasing agent, Brown University.

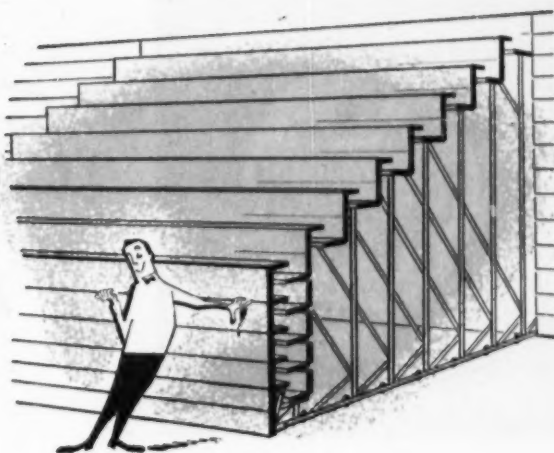
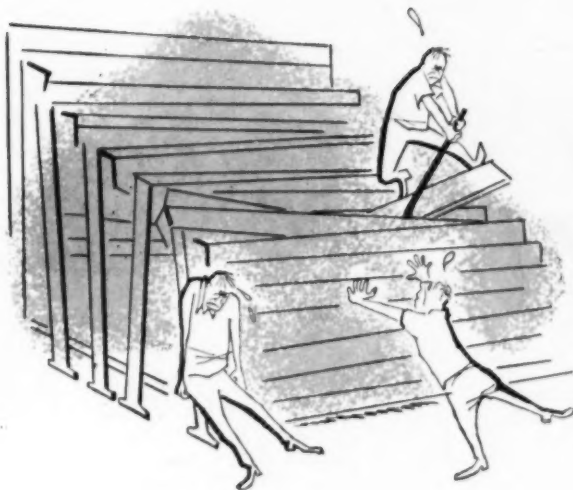
Reciprocal Arrangements

Question: What is being done to provide a reciprocal arrangement between colleges for remission of tuition fees for offspring of faculty personnel at the institutions involved?—R.C., Ala.

ANSWER: Here is a brief description of the plan as it operates at present. More information with respect to reciprocal arrangements between colleges for remission of tuition fees of faculty and staff personnel at institutions involved may be obtained from Dean Robert Brooks, Williams College.

As the plan now operates, each participating institution lists the number of offspring of college age during a current five-year period. This becomes the maximum for student scholarship commitments of that college for that five-year period. A further development of the same principle applies to the second five-year period.

Participating colleges have granted full tuition scholarships.—JOHN SCHLEGEL, treasurer, Lafayette College.



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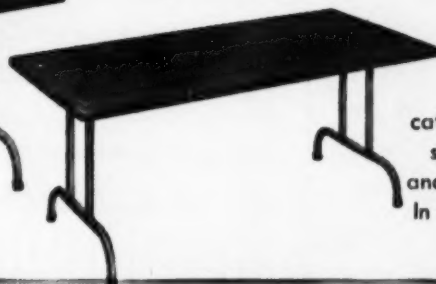


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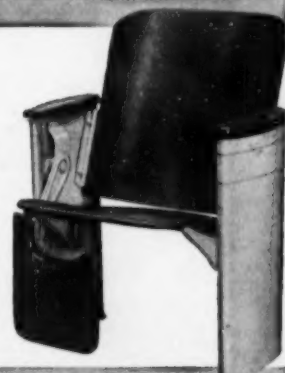


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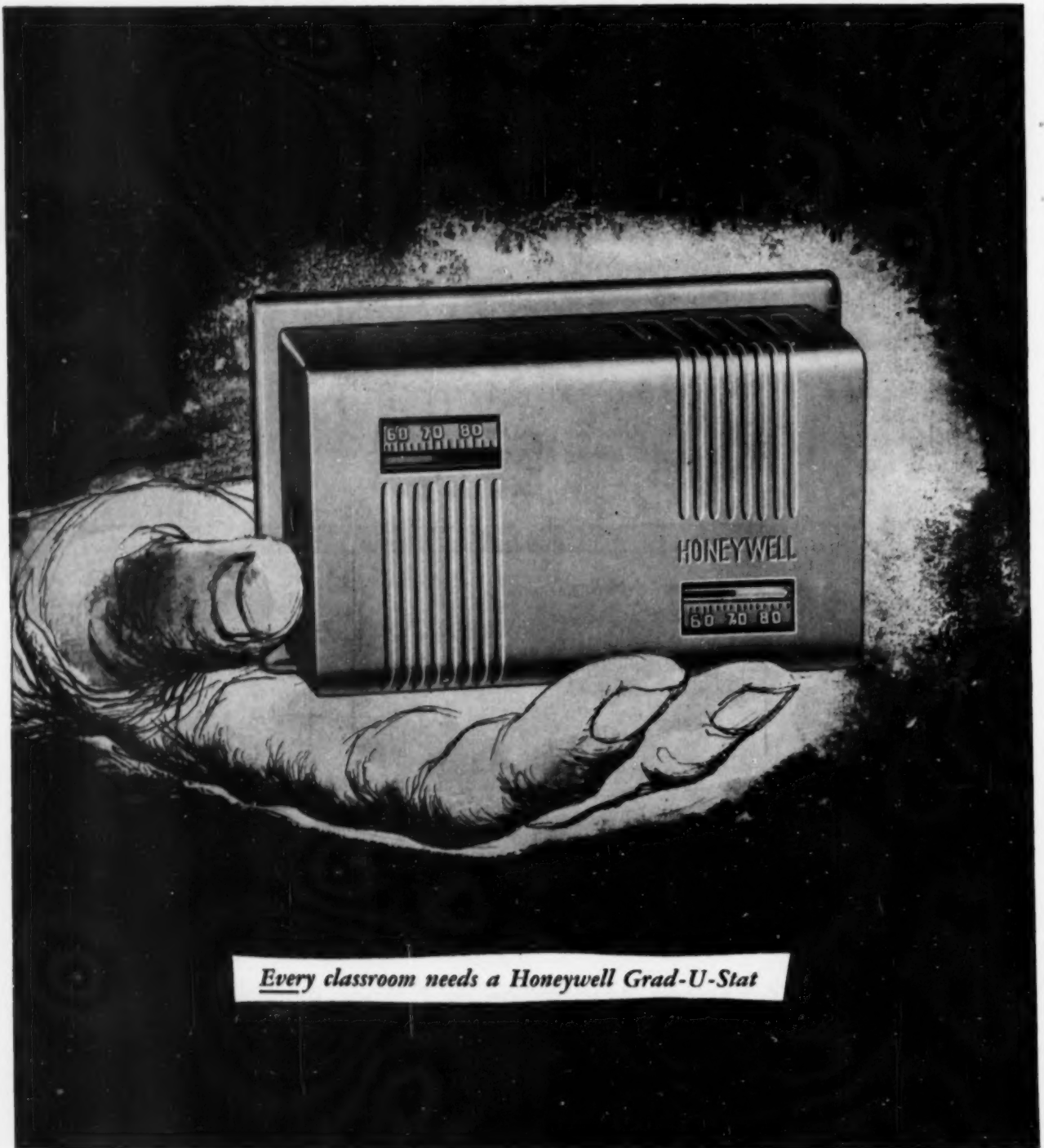
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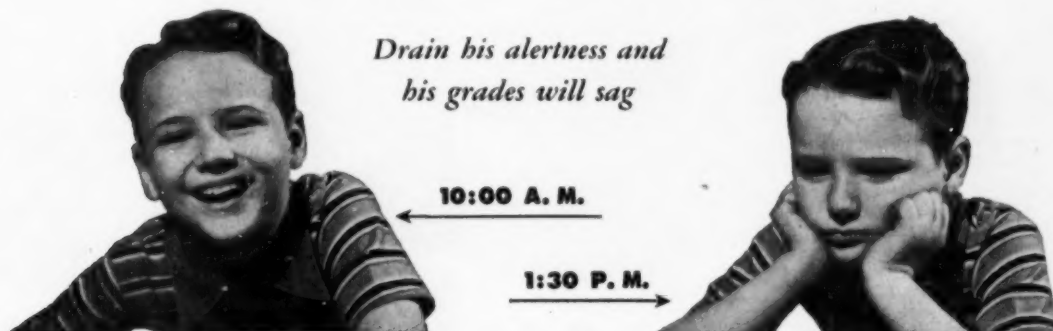
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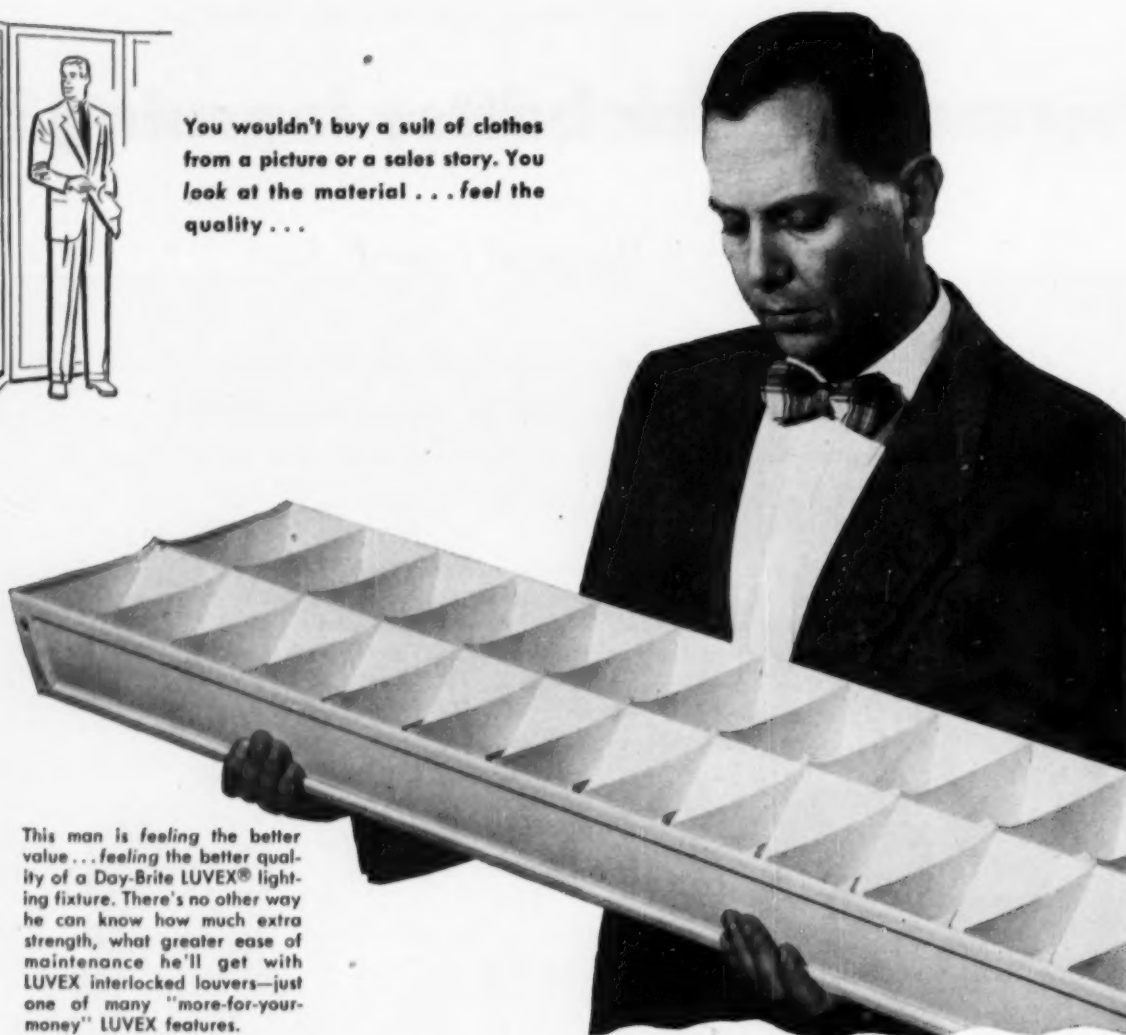
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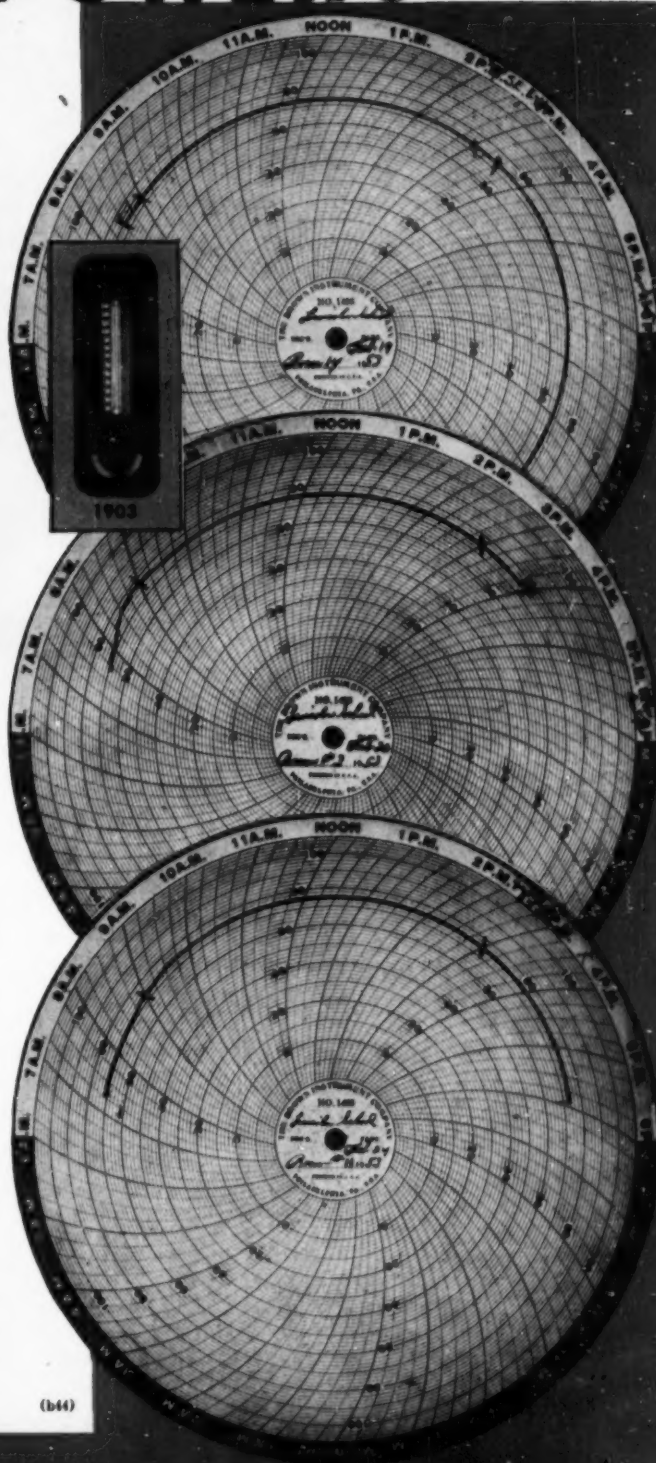


Miss K. Mart, Teacher in Room 14 Lincoln School, Racine, Wis. "T" is POWERS Type A Thermostat installed in 1903. It controls mixing dampers. Thermostat was set for 75° F. Note even control during schools hours. "RT" is Recording Thermometer which made charts at right in February 1953.

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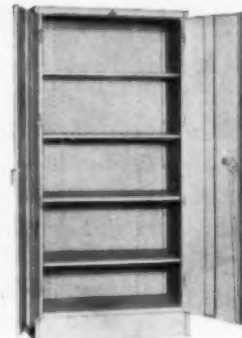


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Have Taxes Killed the Goose?

ARNAUD C. MARTS

President, Marts & Lundy, Inc.
New York City



DURING THE LAST 20 YEARS WE HAVE EXPERIENCED a monumental increase in annual federal tax volume—from \$7 billion to \$65 billion—which one would suppose would have emptied the pockets and dried up the ability of the American people to continue their voluntary gifts to our nontax supported institutions. No wonder that for 20 years many of our leaders have been prophesying that these taxes *would* "kill the goose who lays the golden eggs" of philanthropy, and that some are now proclaiming that taxes *have* killed the goose. Logically, perhaps they *should* have. In *fact*, they have *not*.

The fact is that during 20 years of mounting federal taxes, philanthropic gifts have climbed the same stairway, mounting steadily from \$500 million 20 years ago to more than \$4 billion per year now.

Why has the harassed taxpayer persisted in, and increased, his generosity to our private agencies of education, religion, health, character building, and culture? Because, in my opinion, these voluntary efforts to make a better world are a deeply rooted manifestation of the basic American character and ideal.

Alexis de Tocqueville was struck by this American characteristic a century and a quarter ago when he wrote on his visit to America:

"You will not believe it when I tell you how these Americans behave. In a local community in their country a citizen may conceive of some need which is not being met. What does he do? He goes across the street and discusses it with his neighbor. Then what happens? A committee comes into existence and then the committee begins functioning on behalf of that need and you won't believe this but it's true. All of this is done without any reference to any bureaucrat. . . ."

He added this appraisal, "The health of a democratic society may be measured by the quality of functions performed by private citizens."

There it is—a major reason why high taxes have not destroyed the golden eggs of philanthropy.

There are other important reasons, which cannot be developed in detail here. One is the explosive nature of the American economy in our day. Some of the same persons who have prophesied that taxes would kill philanthropy have also prophesied that America's "tired economy" was about to lie down in the dust and die. But it has not. Instead, the national income of the people of this nation has grown from \$90 billion per year in the 1920 decade to an annual \$265 billion today. Our colleges and universities and educational system deserve the credit for this vast expansion of American industry and wealth. For this new wealth is being created by the *minds* of men. No longer is our chief wealth based upon the exploitation of our natural resources. New products and new methods are being dreamed up each day by our educated men and women. The investments that America has made in education from the earliest days are now paying enormous dividends in national income and prosperity.

Another important reason that philanthropic giving has risen to unprecedented levels, in spite of mounting taxes, is to be found in the new methods for interesting the people in our voluntary institutions. A new profession has been rising within our generation, a profession of capable men and women who are devoting their careers to learning and applying the best fund raising methods in support of our voluntary institutions. Their efforts are no small factor, I believe, in the recent increases in philanthropic gifts.

Colleges and universities have enjoyed their full share of this increase of philanthropic giving, steadily climbing year by year up the golden stairway from \$60 million 20 years ago to about \$300 million per year now.

College and university administrators, the golden eggs are still there. In fact, they are larger and more numerous than ever before. They are yours for the winning.

Looking Forward

National Assembly, 1955

THERE IS INCREASING EVIDENCE THAT THE REGIONAL business officer associations are looking with more favor than in months past on the proposal to hold a national assembly of college business officers in 1955. The program and site of the meeting will be determined by the board of directors of the National Federation of College and University Business Officer Associations.

It is not too early to suggest that a prompt decision be made as to the location and duration of the 1955 assembly so that regional business officer associations meeting in annual conventions this spring may be aware of the assembly meeting and thus avoid a possible conflict in dates.

Representative attendance at the assembly would be further assured if some hint as to the program be made available this spring. Care must be taken in developing the program to see that it is broadly representative of the interests and objectives of the regional associations and partial to none.

The 1955 assembly of college business officers offers a real opportunity for enhancing the professional competence of college administrators. If the opportunity is not soon seized, however, it can through neglect be rendered sterile and ineffective.

Just Off the Press

DIFFICULT AS IT MAY BE, COLLEGE ADMINISTRATORS must allocate time for reading books that further their professional education. Within recent weeks several volumes have come off the press that warrant space on the administrator's book shelf.

"Philanthropy's Role in Civilization" by Dr. Arnaud C. Marts, published by Harper & Brothers, reviews in considerable detail the early history of philanthropy, with particular emphasis on the churches and colleges of America. One of the most challenging chapters, "Have Taxes Killed the Goose?" points out that the statement, "the days of large gifts and bequests are gone," has no basis in fact. College executives responsible for fund development will find Dr. Marts' observations on this subject stimulating.

Congressional investigation of college professors has reheated the academic freedom controversy. One of the

most logical and articulate spokesmen for academic freedom is Samuel P. Capen, chancellor emeritus of the University of Buffalo. In his new book, "The Management of Universities," brought out by Foster and Stewart Publishing Corporation of Buffalo, Dr. Capen has with rare wit and logic made his points stick. College administrators, on the business side of the fence, need to make certain that they understand the principles of academic freedom; Dr. Capen's book should contribute notably to such enlightenment.

The new and inexperienced college business administrator will find Robert E. Heywood's "A Manual of Accounts for Colleges and Universities," published and distributed by the Illini Union Bookstore at Champaign, Ill., to be a most helpful tool. It is the aim of this booklet to present a manual of accounts that will collect the financial data in such manner as to (1) promote accurate recording of transactions, (2) facilitate construction of financial statements which reflect uniform reporting, and (3) minimize clerical effort. The suggested chart of accounts attempts to provide for the commoner situations that are found in American colleges and universities.

For a lively, readable history of the American college from 1636 to 1953, one should turn to Ernest Earnest's "Academic Procession," published by Bobbs-Merrill. The author is more interested in the part colleges have played in our cultural history than in verifying the glory of academic "firsts." He evaluates the colleges of each period on the pragmatic basis of the extent to which they educated men and women to live and earn a living in the world of their times.

The author writes with candor and informality; the following passage is typical: "It is not surprising . . . that the Reverend Nathaniel Eaton, the first master of Harvard, introduced the British method of inculcating the classics by means of a stick applied to the buttocks" and refers to the college's food service problems by commenting that "The master's wife, Mrs. Eaton, was the pioneer in the long line of harpies and incompetents to undertake the feeding of students."

Though much of the book is written in such breezy fashion, it represents a serious attempt at intelligent review of American higher education over the last 300 years. The light touch makes for easy reading.

AT A NEW YORK DINNER HELD ON Feb. 11, 1953, the formation of a nationwide organization to assist colleges in obtaining grants from corporations was announced. Prominent corporation leaders were involved and, from the clear statements issued, it was apparent that a group had been established that intended to meet head-on the problem of a "deficit economy" in college financing.

This announcement culminated many years of experience on the part of business leaders in channeling support funds to colleges and universities. It was meant to focus attention on the problems and complications that have developed through the years as more and more givers and recipients have been added to the lists. Apparently, the time has come when a more systematic procedure is to be developed. For this reason, it seems especially appropriate that college business managers should now school themselves on the facts and trends in corporation giving.

The council has now been incorporated and is called "Financial Aid to Education, Inc." Wilson M. Compton, formerly president of the State College of Washington, has been named as president and chief executive officer and he has established offices at 6 East 45th Street, New York City. The council has announced its program as a three-year project to be supported by a budget of \$600,000 which already has been contributed by a group of foundations. This prompt foundation support adds considerable prestige to the new organization.

EXPERIENCE WITH GIVING

Benjamin Fine reported in the *New York Times* on June 22, 1953, to the effect that more financial problems now beset the colleges and universities than ever before. He reported that in 1952-53 only 58 per cent of private colleges operated on a balanced budget whereas in 1942-43, 80 per cent were able to balance income and outgo. However, he makes it clear that these financial problems have arisen in spite of a 71 per cent rise in tuition charges during the last decade and in spite of increasingly successful fund raising from private sources. Mr. Fine quotes President Deane W. Malott of Cornell University as follows: "One of the few notes for optimism lies in the growth of support from enlightened business and industry." The figures bear out these statements.

**Needed: an orderly, logical set
of procedures that may be followed —**

When Corporations Give to Higher Education

JOHN R. RICHARDS

Vice Chancellor, Oregon State System of Higher Education

The increasing rate of corporation giving to all donees is shown in the following listing, taken from the "Statistics of Income," United States Treasury Department. Not only are the absolute amounts larger in more recent years but also the amount given as a proportion of net profits is generally greater than in the years prior to World War II.

CONTRIBUTIONS		
Year	Amount (000 omitted)	Per Cent of Net Profit
1936	\$ 29,968	0.39
1937	32,727	0.42
1938	27,233	0.66
1939	30,730	0.43
1940	38,124	0.41
1941	58,498	0.35
1942	98,296	0.42
1943	159,221	0.57
1944	234,194	0.88
1945	265,679	1.24
1946	213,872	0.84
1947	241,228	0.76
1948	239,337	0.69

The council of state governments, in 1952, released the results of a study of private gifts made *directly to higher education*.¹ These figures demonstrate conclusively that the colleges and universities are faring well as one of the major social activities supported by private givers. The amounts received each fourth year between 1926 and 1950 are:

PRIVATE GIFTS, INCOME	
1926	\$ 16,835,000
1930	24,931,000
1934	27,468,000
1938	36,908,000
1942	45,916,000
1946	69,511,000
1950	118,626,000

In order to assess these amounts satisfactorily, it is necessary to cast

them in terms of purchasing power. These figures adjusted for dollar value (Consumers Price Index, U.S. Department of Labor, revised series) become the following adjusted numbers demonstrating rate of giving:

1926-22	1942- 66
1930-35	1946- 83
1934-48	1950-115
1938-61	

This listing shows that private gifts to colleges and universities grew much more rapidly than did prices over the last quarter decade. As a matter of fact, the John Price Jones Company recently reported that private philanthropy for higher education reached a new high level in 1951-52.² The company reported a survey of 51 of the largest institutions and said that gifts and bequests to these institutions since the end of World War II have amounted to \$637,000,000. The total of gifts reported for this banner year was 3.2 per cent greater than in the previous year.

The Commission on Financing Higher Education, set up in 1949 under the sponsorship of the Association of American Universities, recognized the great potential of giving by industry and business. In its series of 10 volumes and in its recently issued final report, it considers the problems of underwriting university programs in considerable detail.³ In its

¹Higher Education in the Forty-Eight States, Council of State Governments, 1952, table 14.

²School and Society, March 28, 1953, p. 205.

³The two principal volumes are: *Nature and Needs of Higher Education* and *Financing Higher Education in the United States*, Columbia University.

conclusion it makes the following statement: "We appeal to business and industrial corporations and to labor unions not only to increase their financial support of higher education but to do so in full appreciation of the benefits they have derived from it, benefits which have flowed both from very expensive graduate training and from the transcendently valuable liberal arts education which many in their employ have had."

REASONS FOR INCREASED GIVING

Undoubtedly, business leaders are giving greater recognition than ever before to the contributions made directly to them and their enterprises by higher education. This has been a factor in persuading them to make donations not only for the on-going programs of colleges and universities but also in the support of physical development. From many public statements of corporation leaders, it is clear that a relationship between good business and good education is recognized.

Yet, there is little question but that corporations give most generously when, because of the operation of tax laws, it "costs them less" to do so. F. Emerson Andrews, author of "Corporation Giving,"⁴ has stated this process as follows: "The dollars that corporations give away are now more the taxpayers' than those of stockholders. Under the present tax structure, a corporation with normal profits can give away \$1000 at a net cost of \$480, the remaining \$520 representing taxes saved. If it is in the excess profits bracket, its gift of \$1000 costs only \$180; conversely, if it is willing to surrender \$1000 in profits, it can make a gift of \$556, the government paying \$456 in forgiven taxes. Such deductions are limited to 5 per cent of profits."⁵

Mr. Andrews, in the volume referred to, has included a preface chart showing a relationship between corporation contributions and net profits for the years 1936-49. A very direct relationship between these two series is demonstrated. This, of course, is to be expected since corporations cannot be expected to pay out year after year more than they take in. Since this is an operating principle that must prevail, it is obvious that colleges and universities cannot become completely

dependent upon a source of income that fluctuates in such a manner. Instruction and research almost by their very nature require constant and usually increasing support.

We cannot hope for a leveling of operations in business that will result in level net annual incomes of corporations. The difficulties of long-range projections by a single firm are well stated by Joel Dean when he says: "Many kinds of investigations are needed to make these projections realistic: (1) long-run conjectures about levels of general economic activity; (2) long-range forecasts of physical volumes of production of the industry and the firm; (3) projection of probable capacity needs at distant dates in the light of these activity forecasts; (4) projection of technical and locational obsolescence, as best it can be foreseen, in terms of incidence on particular facilities; (5) projection of programmable replacement and major repairs year by year."⁶

FURTHER INCREASES IN GIVING?

While all evidence points to a recent advance in corporation donations to education, it is certain that corporations have not been giving all that they might. They give a small fraction of the 5 per cent that is allowed to them under the tax rules. A principal reason for withholding gifts to higher education revolves about the various difficulties connected with such giving. The two principal questions that are unanswered are: Which are the most deserving educational activities? How may corporation giving be most effectively applied?

A corporation executive who prefers to remain anonymous has stated the problem thus:

"Agreement has not been reached on the methods by which the corporations can most appropriately and effectively increase their financial aid to colleges. Independent campaigns for development programs in the various colleges promise to be effective only in unusually favorable situations. Federated campaigning, through state and regional college foundations, likewise promises only a limited success. Moreover, both of these methods of approach fail to satisfy the requirements of donor corporations. They seem particularly unsuited to the requirements of the larger national corporations.

"The success of the colleges in pro-

moting the willingness of corporations to give aid, coupled with their failure to develop generally acceptable methods of giving, has compelled the corporations to attempt to devise methods of their own. Acting independently of one another, scores of national corporations have been contemplating a variety of devices. A few have actually launched programs, but none of them to date has appeared sound enough to set a pattern for others. Some seem too artificial and arbitrary. Some create as much ill will as good. Some result in gifts that are virtually anonymous, with little reward for the donor. Others might even be said to be somewhat inimical to the best interests of higher education and of society generally. Their most common weakness, however, lies in the fact that no single corporation has sufficient funds to justify the establishment and administration of a college aid program that is fully national in scope.

"It seems inevitable, therefore, that corporations which are not attracted to plans developed by the colleges and which have not established satisfactory plans of their own must contemplate programs which they can sponsor jointly with other corporations."

I have previously stated the various questions that face corporations in giving to education.⁷ In brief, the problems involved are concerned with the relating of gifts to corporate interests, determination of relative needs of various educational activities, provision for flexibility without the essential pattern of present-day education being destroyed, the giving of account to regional and area considerations, recognition of sectarian problems, the seeking of coordination between corporations and other donor and support groups.

TWO SYSTEMS NOW DEVELOPING

Private colleges in a number of states have been impressed with the difficulties faced by the corporations in hearing all claimants to their largesse, and themselves have become discouraged about overlapping efforts. In a number of states they have now grouped themselves into loose federations for the purpose of coordinate action in raising money. The plan in these states is to develop a general fund from which all may draw. These groups have been founded in 30 or

⁴Andrews, F. Emerson: *Corporation Giving*, Russell Sage Foundation, 1952.

⁵The Business of Giving, *Atlantic Monthly*, February 1953.

⁶Dean, Joel: *Needed Research in Finance*, *Journal of Finance*, May 1953, p. 119.

⁷Questions Concerning Corporation Giving to Education, *School and Society*, June 13, 1953, p. 375.

more states; the latest one to be announced has been founded in New Jersey.

The usual distribution formula of these groups is to divide available funds on the basis of 50 per cent of the fund being divided evenly among the institutions and the remainder being assigned on the basis of student population of each of the member institutions.

Some disadvantages of this system of giving to a group have already become apparent. (It is noteworthy that the largest private institutions in the states wherein a group has been formed do not seem to be attracted to the plan.) These disadvantages may be said to be: (1) the arbitrary division of funds regardless of need or merit; (2) a resulting loss of identity of the institutions so connected, and (3) a "watering-down" of appeal, thus making the plan tenable only for the "hungriest" of the institutions.

CHOICE OF COLLEGE

A second system of channeling private funds that has been making ground is a plan whereby the donations of corporations go in the direction of students' choice of institutions. This is done by providing scholarships for designated students, who then go to colleges of their choice. The plan has been described as follows:

"There is a program in undergraduate education which appears suitable for cooperative sponsorship by business and industrial organizations. Corporations desiring to participate would join in the establishment of a national competition among high school seniors for four-year college scholarships. Following the competition each corporation, by mutual agreement with its co-sponsors, would select individual scholarship winners and, in its own name, would give scholarships directly to the students or to the colleges they attend. The number of scholarships sponsored by a given corporation would be in proportion to its financial contribution to the program. By these means a corporation may benefit from the strength of a cooperative effort and yet retain its individual identity and thereby earn the rewards of an independent donor. Scholarships awarded to students attending private colleges would provide cost-of-education supplements for the schools in addition to tuition."

One of the large scholarship programs announced in recent years is that

of the Ford Motor Company. Under the plan of this company the standard fees of the college are met. In addition, in recognition of their special need for funds to meet the full costs of instruction, an arbitrary amount of \$500 per student per year is given to private (nonprofit) institutions.

HAVE THEY LEGAL POWER TO GIVE?

The office of the vice chancellor for development, New York University, has a staff study⁸ in which the following general comment is made:

"In March 1949 the committee on corporate laws (American Bar Association) sent to all secretaries of state and state bar association presidents a memorandum embodying its opinion that corporate giving had the general approval of management and stockholders and that it should be expressly authorized by statute. The committee recommended the inclusion, among the general powers of corporations, of the following: 'To make donations for the public welfare or for charitable, scientific, or educational purposes.' . . . Prior to 1949 13 states, including New York State and New Jersey, had similar statutes. An additional 13 states have since enacted statutes. The present total is 26 states. . . . Most of the statutes expressly include educational institutions as permissible donees. Most of the others use a general phrase like 'charitable' or 'charitable or eleemosynary,' which certainly includes education."

This issue of corporation powers has been resolved to some extent by a decision in the Smith case in New Jersey.⁹ In this decision the statement is made: "The contribution here in question is toward a cause intimately tied into the preservation of American business and the American way of life. Such giving may be called an incidental power but when it is considered in its essential character it may well be regarded as a major, though unwritten, corporate power. It is even more than that. In the court's view of the case, it amounts to a solemn duty."

The New Jersey supreme court, late in June 1953, unanimously upheld the decision of the lower court and said: "It is estimated that annual

⁸Corporate Giving, staff study, vice chancellor for development, New York University, 1953.

⁹Smith v. Barlow, Superior Court of New Jersey, May 19, 1953.

corporate contributions . . . aggregate over \$300 million with over \$6 million thereof going to universities and other educational institutions. These gifts," the court noted, "have almost invariably been unquestioned."

WHICH INSTITUTIONS TO AID?

The New York University document referred to previously carries the following statement (in its appendix D): "Free choice of recipients for educational grants based upon the quality of the institution, its achievement in education, etc. is as essential to healthy competition among . . . universities as the open market for buying and selling is to the survival of the free enterprise system."

Educators must realize that programs they may propose that call for distribution of corporation gifts on a formula devised by college administrators are essentially unsound. While corporations may have the necessary legal powers to give funds in such a fashion, the fact remains that this procedure is a yielding of authority that cannot continue in the long run.

As an illustration, let us examine for a moment the question of corporation giving to public as well as to private institutions. Should the decision on this be made by institutional or by corporation boards? Clearly, the authoritative, lasting decision will be made by the latter.

Some have said that since some private institutions are more needy than are the public ones corporation gifts should be restricted to those not having access to public appropriations. This argument ignores the fact that many present-day educational activities of public institutions in fact do not have access to public funds. In many cases essential programs of public institutions would need to be abandoned if they were denied support from private sources.

It is to be hoped that executives of private institutions will not take a divisive stand against the claims of public institutions. Although college executives may not hope to control the distribution of corporation gifts, they may aspire to assist in the development of an orderly, logical set of procedures that groupings of corporations may follow. This would seem to be the main hope for the development of corporation giving to amounts sufficient to support higher education at optimum levels and to move the college world out of its "red ink" era.

Here is a guide for the

STATEWIDE SALARY SURVEY

ROGER M. GAARDER

*Assistant Personnel Director, Civil Service Commission
San Joaquin County, California*

THE PHENOMENON OF SALARY SURVEYS is not an innovation introduced by modern personnel departments. It goes back to the time when the first hired man made inquiries at the farm across the valley and discovered that he could make more money there than he could with his present employer. Eventually, employers discovered that if they made salary surveys before their employees felt the need to make them that their employees could be kept on the job with that now popular phrase, the "prevailing rate." In recent years, salary surveys have become a recognized procedure in many private and public businesses, culminating in the intricate and widespread functions of the Bureau of Labor Statistics.

I will describe one particular type of survey that has been used successfully in determining comparability of salary rates paid to state and university employees with those paid to private employees in the same state.

The over-all plan of the survey will be recognized by anyone who has taken a beginning course in statistics. In Croxton and Cowden's "Applied General Statistics," the survey's plan is described from beginning to end in the section called "Collecting Statistical Data." There is, of course, no difference between collecting wage data and any other kind of statistical data.

TIMING THE SURVEY

At certain times of the year, many employers will be far too busy to spend any time on questionnaires. Some industries have seasonal work peaks; most are overburdened at their fiscal year-end periods. Many companies can furnish representative information only when their products or services are in demand and their operations are functioning normally. The timing of the survey also will be influenced by general economic conditions. At the time of rising wages, for example, it is preferable to wait until the last possible date before starting the survey.

The proper selection of jobs to be surveyed determines, in part, the adequacy of the results obtained. Most schools and institutions have positions that are rarely found in private industry. The position of supervisor of room scheduling would not be included in the survey. But the position of office manager might be included, with comparisons made after the results are tabulated, between the two positions. If it is found that a number of specialized positions must be surveyed, e.g., radio or hospital positions, supplemental surveys may be required, directed toward the appropriate employers in those activities. It should be stressed, however, that only those jobs that are meaningful to private employers should be included.

STANDARDIZE KEY JOBS

There would be little value in establishing an arbitrary limit on the number of jobs to include in the survey. Rather than to include a large number of positions hit-and-miss, in the hope that quantity of jobs is the best selection criterion, it would be preferable to select a few stable "benchmark" jobs that can function as fairly reliable guides for other classifications. Standardization of key jobs will play an important part in making future survey results comparable. Only in that way can a study of trends be made.

Job titles may have to be "translated" into business English. Your audiovisual technician might be a projectionist to the private employer. Job descriptions require severe foreshortening to fit the limited space provided in a questionnaire. Extreme care must be observed to retain the basic concept of a job within the bounds of two or three sentences.

FRINGE BENEFITS

Employers, on the whole, do not like long questionnaires. The affinity between a six-page, closely printed form and the nearest wastebasket is strong.

If information on fringe benefits is needed, the questions should be few, unambiguous and adapted for brief, objective answers. Such questions will be appreciated by the survey tabulators, since answers consisting of lengthy essays will be difficult to transfer to a key-punch card. Information on sick leave, annual leave, holidays and overtime policies is, nevertheless, a valuable adjunct to a salary survey.

QUESTIONNAIRE DESIGN

In this survey plan, the questionnaire form is mailed to private employers and is filled out independently, in the majority of the cases, with no help from the survey staff. With that situation, it is obvious that the form or forms must be as self-explanatory as possible.

A brief paragraph of instructions should be at the top of the questionnaire. A check list should be provided near the top, indicating the type of activity the employer's company is engaged in, and its approximate number of employees.

Each job listed on the form should have its own description under it. Sufficient and clearly indicated space should be provided in each job listing for hours worked in a basic and/or regular work week; for rates of pay and number of employees at each rate; for types of payment (hourly, weekly, monthly), and for any other payment in kind. It is highly desirable to make the first job listing an example, clearly labeled as such with the blanks filled out in the proper fashion.

The questionnaire should be printed, even if the printing cost will require budget trimming at some other step. A mimeographed questionnaire, despite the professional technic of the stencil-cutter and operator, inevitably results in a cumbersome and somewhat dreary looking form, particularly to the eye of the employer who still has his wastebasket close at hand. Any method of printing that provides for varying

Return this questionnaire in the stamped addressed envelope provided.	UNIVERSITY OF MINNESOTA CIVIL SERVICE PAY SURVEY QUESTIONNAIRE	All information submitted will be kept confidential														
INSTRUCTIONS: Please fill in items 1 and 2. Then, in a manner similar to that in which the Messenger "Example" has already been answered, please provide the necessary data (hours in basic work week, hours in regular work week, pay rates, number of employees, maintenance payment) for each kind of work described below which is found in your organization. If, at the time of reporting pay rates, it is definitely known that certain rates are to be revised on or before January 1, 1950, please enter the revised rate. In any case, the rates reported should be those paid for work during the "BASIC WORK WEEK" (that is, without overtime pay). By "REGULAR WORK WEEK" is meant the actual number of hours regularly worked by employees, and should be reported only if it differs from the basic work week. In reporting "MAINTENANCE OR OTHER PAYMENT IN KIND," please describe the nature and show the average amount per pay period, of value of (1) any food or lodging provided, (2) uniforms furnished and cleaned and (3) transportation furnished employees from residence to place of work.																
1. What type of activity is your organization engaged in? <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Lumbering, Mining, Milling, and Agriculture <input type="checkbox"/> Construction <input type="checkbox"/> Manufacturing and Food Processing </div> <div> <input type="checkbox"/> Transportation, Communication, and Public Utilities <input type="checkbox"/> Wholesale or Retail <input type="checkbox"/> Finance: Banks, Trusts, and Insurance </div> <div> <input type="checkbox"/> Hotels and Property Management <input type="checkbox"/> Hospitals and Social Service <input type="checkbox"/> Engineering and Other Professional Services </div> </div>																
2. Approximately how many employees do you have? <div style="display: flex; justify-content: space-around;"> <input type="checkbox"/> Under 100 <input type="checkbox"/> 100-500 <input type="checkbox"/> 500-1,000 <input type="checkbox"/> 1,000 or more </div>																
Kind of Work	Hrs. in Basic Work Week	Hrs. in Regular Work Week	Present Pay Rates of Employees Doing This Kind of Work (Including Cost-of-Living Adjustments BUT NOT OVERTIME)	Maintenance or Other Payment in Kind												
MESSANGER: Runs errands; wraps packages; sorts mail, and stuffs and seals outgoing mail; may do very simple clerical work under close supervision.	40	44	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td>Rates</td> <td>\$90</td> <td>\$100</td> <td>\$110</td> <td>\$115</td> <td>\$120</td> </tr> <tr> <td>No. of Empl's</td> <td>3</td> <td>5</td> <td>10</td> <td>7</td> <td>2</td> </tr> </table>	Rates	\$90	\$100	\$110	\$115	\$120	No. of Empl's	3	5	10	7	2	Uniforms Furnished and Cleaned \$4.00 Per Month
Rates	\$90	\$100	\$110	\$115	\$120											
No. of Empl's	3	5	10	7	2											
Rates are Per: <input type="checkbox"/> Hour <input type="checkbox"/> Day <input type="checkbox"/> Week <input checked="" type="checkbox"/> Month																
JUNIOR CLERK: Does routine clerical work of a beginning grade although variety of duties increases with experience; does filing; operates simple office machines; makes simple arithmetical computations; posts data and keeps standard office records.			<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr><td>Rates</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>No. of Empl's</td><td></td><td></td><td></td><td></td><td></td></tr> </table>	Rates						No. of Empl's						
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SENIOR CLERK: Performs responsible clerical duties involving frequent exercise of judgment based on knowledge of practices and procedures gained through previous office experience; may supervise a small group of subordinates performing clerical tasks.			<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr><td>Rates</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>No. of Empl's</td><td></td><td></td><td></td><td></td><td></td></tr> </table>	Rates						No. of Empl's						
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TYPIST: Types letters, statements, reports, and other material from copy, rough draft, or dictaphone and may do routine clerical work such as filing comparable to that done by Junior Clerk.			<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr><td>Rates</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>No. of Empl's</td><td></td><td></td><td></td><td></td><td></td></tr> </table>	Rates						No. of Empl's						
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JUNIOR STENOGRAPHER: Takes and transcribes oral dictation; does routine typing and clerical work; answers telephone; receives callers and keeps appointment records.			<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr><td>Rates</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>No. of Empl's</td><td></td><td></td><td></td><td></td><td></td></tr> </table>	Rates						No. of Empl's						
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SENIOR STENOGRAPHER OR SECRETARY: Performs more difficult and responsible stenographic work; relieves a superior of office details and does other clerical tasks requiring a knowledge of practices and procedures gained through experience. Interviews office callers; maintains records and may have minor supervisory responsibilities.			<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr><td>Rates</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>No. of Empl's</td><td></td><td></td><td></td><td></td><td></td></tr> </table>	Rates						No. of Empl's						
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KEY PUNCH OPERATOR: Operates numeric or alphabetic key punches. Punches, verifies, codes and sorts tabulating cards by established codes; performs related clerical work.			<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr><td>Rates</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>No. of Empl's</td><td></td><td></td><td></td><td></td><td></td></tr> </table>	Rates						No. of Empl's						
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sizes of type plus margin alignment is preferable to other duplicating methods.

A covering letter should also be planned, to be mailed along with the

questionnaire. The letter can be a brief explanation of the reasons for making the survey, signed by the personnel director or by one of the administrative officers. It would be well to use the

offset lithography method or some similar duplicating method for such a letter.

The printer can be called upon to run the questionnaires and letters

through a folding machine, relieving the envelope stuffer of at least half of his job.

SELECTION OF WAGE SOURCES

The selection of sources for wage information, if accomplished efficiently, calls for planning plus the concerted efforts of a small research staff. The planning phase calls for a decision on the number of firms to be contacted in each business activity, along with a decision on the minimum size of firms to contact. This phase calls for a certain degree of familiarity with the area to be surveyed. In city areas, where the majority of the questionnaires will be sent, the yellow pages of the telephone directories may serve as one type of guide. Various public agencies may have current mailing lists of industries and other services throughout the state. It may be possible to have such agencies, e.g. employment and health departments, actually mail questionnaires to firms on their lists, thus relieving the surveyor of a large part of his selection work.

Once decisions have been made, the research staff can begin its function. In any good sized school library or in the business branches of a city library, there are a number of volumes and directories that provide information on all types of private businesses. These directories can be searched for names and addresses of companies that meet the requirement as to the number of employees, which can then be noted by the research assistant or read directly to a typist. In making such lists, it is advisable to make two separate lists, one for local firms, another for firms elsewhere in the state. Sampling may or may not be required, depending entirely upon the industrial and business activity within the area. It is preferable, of course, to make as complete a survey as possible.

CODING THE FIRMS

Since the survey is confidential, the firms are not required to identify themselves on the questionnaires. Therefore, in order to check on the completeness of returns from each activity area, as well as for tabulation procedures, a four-digit code number is given to each firm. The first digit identifies the business activity, the other three identify the firm. For example, the first company in the manufacturing and food processing activity, which is the third activity of a total of nine, is given the code number of 3001. In this manner,

the key-punch operator later on can work with as many as 999 different firms in one activity. The number is stamped on the questionnaire and after the firm name on a master list of wage sources.

DISTRIBUTION

The mailing operation can be handled rapidly if the entire procedure is planned beforehand. It is, of course, essential that the questionnaires, each of which has been stamped with a code number, are mailed to the corresponding firms. It may be decided that the covering letter, having the name and address of the firm at the top, will be mailed, along with the questionnaire and return envelope, in a window envelope. If the covering letters have no specific salutations, the envelopes will have to have addresses typed on them, necessitating the matching of the envelopes to the proper questionnaires. A postage meter or prestamped envelopes will obviate the chore of affixing stamps to the envelopes. An envelope sealing machine is another time-saving device.

SURVEY OFFICE

If at all possible, separate rooms should be set aside for the survey staff. There should be space for two or three persons to work on the questionnaires, as they are being returned, plus desk space for the supervisor of the survey. All necessary equipment should be set up in these rooms before the questionnaires begin coming in. Arrangements for space and equipment will depend upon the size of the survey. Telephones are essential, as are several files and typewriters.

Chaos can be prevented in handling returned questionnaires only by a definite check-off procedure aided by flow charts. The flow charts should indicate the exact number of questionnaires in each operational phase. Check marks on each questionnaire should indicate each phase the form has passed through. It is desirable to make duplicate check marks after the names of firms on the master list.

With these procedures, the supervisor of the survey always has a current picture of the work in progress. He can spot immediately low return percentages in any activity area. Duplication in follow-up work is avoided. Incomplete returns are noted before being coded for tabulation. There is a comfortable feeling that matters are well in hand. A decision can easily be

made, by looking over the charts, on the cut-off date, after which no returns can be included in the tabulation.

FOLLOW-UP WORK

Questionnaires are mailed to all firms included in the list of sources for wage information. But it is assumed in this case that the survey originates in an urban center, which would make possible personal visits to local firms. The covering letter sent to the local firms should include the statement that a representative will be glad to call on the firm to aid in filling out the questionnaire.

A staff of field men should be assembled, the number depending on the number of firms to be visited in the local area and on the time factor. If possible, the field men should be trained in classification work and should be familiar with the jobs being surveyed. In addition, one or two brief training sessions should be held, to ensure consistent results.

All of the larger firms in each activity should be visited by a field man, whether or not the firms voluntarily request such service. It is obvious that returns will be more reliable if an experienced job analyst has passed upon the information included in them. The task can be made easier by having one of the office staff make definite appointments by telephone. When the field man visits a firm, he should attempt to get the questionnaire filled out immediately, rather than just to explain the general features of the form and then leave it to be filled out later.

Relatively few firms need to be convinced of the value of wage surveys. The results of the survey should be offered freely to all firms that cooperate. It is sometimes necessary to stress the confidential nature of the survey. Many times, if the field man gets a "cold shoulder" from the first man he talks to in the firm, better results can be obtained by asking to talk to the first man's superior. Tact, diplomacy and a steel hand are important requisites for the successful field man.

It is usually found that the returns fall off after 10 days or two weeks. At this point, returns from local firms can be increased by a telephone call being made to every firm that has not been heard from. This task may call for a fairly large telephone staff to accomplish it within a short length of time.

If time permits, additional letters may be sent to firms outside of the

local area, if low return percentages are discovered in any other localities. The decision must be made by the supervisor of the survey as to what percentage of returns is adequate.

TABULATION PROCEDURE

The type of survey described requires the use of tabulating equipment. The use of such equipment should be planned so that the work will not be interrupted by conflicting work commitments in the tabulating department.

Before any tabulating code work can be done on returned questionnaires, a punch card must be designed. The technic of punch card designing will not be described here, but if there are doubts concerning the method, the tabulating equipment supervisor can be relied upon for help. In fact, the tabulating supervisor will be found to be of great assistance throughout the entire work on the survey results, and the survey supervisor would do well to discuss all of his ideas and problems concerning the tabulation work with this tabulating specialist.

Another procedure to follow before tabulating is the construction of salary conversion tables, plus any other tables needed to convert any aspects of "payments in kind" or fringe benefits into single values. The tabulating code staff should be able to code all completed questionnaires with the use of the punch card design and the conversion tables.

The coding staff also will need a brief training session to ensure consistent, careful work. Code symbols must stand out on the questionnaires, preferably through use of red pencils and the encircling of each symbol. One or two automatic calculating machines may be put to good use in making special conversions not provided for in the conversion tables.

The coded questionnaires should go from the coding staff to the supervisor of the survey, and to as many assistants as he may need, for further checking. It is the supervisor's responsibility to catch all inaccurate coding and salary conversions; to watch for data that are extremely out of line, and to put aside all incomplete, inaccurate or questionable returns for further follow-up work or for elimination from the survey.

The kinds of tabulations that can be run are limited only by the supervisor's plans for reporting the survey. The entire report may be divided between local information and information out-

side of the local area. Tabulation runs divided in such a way may show the number of firms reporting, by type of activity and size; wage rates (by whatever conversion is chosen: monthly, semimonthly, etc.); length of annual leave, amount of paid sick leave, number of holidays with pay and methods of overtime payment, all by types of activity and divided between salaried employees and wage earners. These are just examples of the possible uses that can be made of the punch card data.

INTERPRETATION

The basic method of reporting wage data is the "average wage." With the type of data collected in a wage survey, the average wage means the median, or middle wage reported, for each job classification. The supervisor also may choose to report the first and third quartiles, rather than the extreme limits of the range, to show the "normal" range instead of the widest possible range. Along with such wage reporting, the number of employees reported for each job should be shown.

Statistical treatment of the tabulations may be refined to any degree that is desired. However, most survey supervisors base their judgments of the significance and validity of the results on their original sampling of firms and percentage of returns from these firms. While this method may displease the professional statistician, it has worked out fairly satisfactorily in the opinion of most wage surveyors.

If this is a "first" survey, comparisons may be made to present salary levels of the institution making the survey, in terms of "per cent over" or "per cent under." If it is one of a series of surveys, comparisons also may be made between surveys to indicate trends in wages.

DESIGN AND PRINTING

Tables may now be designed for inclusion in the final report, based on such tabulation runs as were described. In designing the wage rates tables, which will take up the bulk of the report, it is desirable to place the job descriptions under the job titles, as was done on the questionnaire. Or, space may be conserved in the tables by placing the job descriptions on the pages facing the tables.

The remainder of the report can then be completed. It should include a properly titled cover, a foreword (signed by the same officer who signed the covering letters), a table of con-

tents, and as much introductory and explanatory text as is needed.

The report is now ready to be printed, by whatever method the budget allows. Some money might be saved by having the report duplicated by offset lithography and having only the cover printed. Whatever method is used, a decision must be made whether or not the plates or stencils should be saved for future reproduction.

DISTRIBUTION OF REPORT

Since salary rates can change appreciably from month to month, the speed in distributing the results of a salary survey is important to the survey's usefulness. All cooperating firms who requested copies of the report should, of course, have their requests honored as soon as possible. Other institutions similar to the one making the survey will appreciate receiving copies. Any individuals or judicial bodies responsible for appropriating money to the institution will need the report for future, informed decisions. The report should, finally, be made available to any interested employee in the institution.

DISPOSITION OF MATERIALS

For future reference, all of the survey's raw materials should be cataloged and stored. Much time can be saved on later surveys if the same conversion tables can be used. Field men find that questionnaires made out on earlier surveys can be useful in helping the same companies fill out the new ones. A brief index should be made of all materials, so that items can be found without unnecessary searching in files and boxes.

FINAL OFFICE REPORT

The final, and yet very important, step to take is the writing of the office report. This report should go into fine detail, describing each step in the survey, along with the materials and man-hours utilized. Indications should be made concerning the amount of clerical aid needed in the various steps throughout the survey.

The best technic for writing such a report is to base it on a daily log, which, in turn, should be as complete and specific as the supervisor is capable of making it. Only with such a report can the administration get a clear picture of the time and money needed for any future surveys. And only with such a report can a future survey staff avoid hours, and even days, of unnecessary delay and frustration.

AN INDUSTRY STEPS IN

to aid independent liberal arts colleges

in Ohio through scholarships and grants

to eligible children of company employees

R. H. COLLACOTT

Assistant to Chairman of the Board
Standard Oil Company, Cleveland

SEEKING ADDITIONAL FINANCIAL assistance, Ohio's independent liberal arts colleges today find themselves in an economic environment that presents a financial paradox.

Ohio has a population of 8,000,000. Value to products added by manufacture in 1951 was \$6,500,000,000. Personal income totaled \$14,500,000,000, on which was paid \$2,235,000,000 federal income tax, and \$1,765,000,000 corporate income tax.

To raise \$1,000,000 annually, then, would appear quite modest, indeed. Yet, it still presents a formidable task, one that, in appealing to corporations, calls for an approach based upon facts and reasons different from the ordinary garden variety used in soliciting contributions to community funds.

The decline in large personal incomes and the lowered return on endowment funds have been accompanied by a rise in stewardship management of corporations, thereby emphasizing management's stockholder obligation and seriously limiting its freedom to make gifts indiscriminately. This, in turn, frequently makes it essential to

show some quid pro quo—and that, too, often is none too easy.

Today, like the colleges, many corporations are seeking ways to establish the values of the liberal arts college. Technical and vocational schools find this problem less severe. Payments to institutions rendering clearly recognized services are no different, really, from other disbursements made by a company for routine operation. Areas of service beyond these conditions either must be clarified and defined or else generated.

One service area easily overlooked is the time and money spent by a company on supplemental educational programs. Earliest ones affecting employees are those of a straight training type. Here, the academic world can offer little help.

Then, as certain individuals lift their heads above their fellows, they usually are singled out for the continuous, intensive process of management development. This runs into money.

Just how this work could be anticipated in the undergraduate colleges remains problematical, but it's a field meriting investigation. Of interest in this connection is Sohio's plan for scholarships, fellowships and grants

to educational institutions for *direct* business purposes.

The plan is based upon the recognition by Sohio (1) that successful future operations will require the services of new employees thoroughly trained in several technological and business administration fields, and (2) that it may, as conditions warrant, prove advantageous for the company to supplement its own research activities by utilizing research facilities available in universities and colleges.

As established within the scope allowed legally and our basic principle of conducting our business in the best interests of stockholders, employees and customers, this plan covers expenditures of a business expense nature to educational institutions. Legally, Sohio can make expenditures for scholarships, fellowships and grants to any college or university provided it produces a direct business return to the company.

This "direct business return" plan differs from the Ohio Foundation Plan but is mentioned here simply because any institution, in so qualifying, can derive additional income beyond that received from the Ohio Foundation. Let's examine and appraise briefly the plan worked out under the Ohio Foundation of Independent Colleges.

Purpose of the plan is based upon a fourfold premise by which Sohio recognizes that:

1. Privately supported educational institutions constitute an important factor in the American system of living, and an indispensable part of the society to which the company owes its livelihood.

2. Drastic reduction of private income through taxation has made corporate support of such institutions increasingly important, if not essential.

3. Complete independence of these educational institutions is a major reason for their ability to contribute to the building of sound reasoning and thought.

4. The company's future depends largely on its ability to employ persons educated in the intellectually free atmosphere generally prevailing in privately operated colleges and universities.

Accordingly, within the scope legally permissible and in conformance with our principal objective of conducting our business in the best interests of stockholders, the Sohio family, and customers, a plan to furnish support through contributions of a public

From an address presented at a meeting of the Associated Colleges of Indiana, Indianapolis, 1953.

relations nature has been established. These grants are for the general support of higher education, particularly the liberal arts institutions. However, several limiting factors govern Sohio's policy for this purpose.

One is the limitation of our financial position. Another is a provision of Ohio corporate law which, while preventing this type of contribution beyond the state of Ohio, does allow it therein to achieve public good will and acceptance, and to carry out our duty in industrial citizenship. Third, Sohio is primarily a consumer sales organization merchandising its products to the purchasing public.

This plan is devised, therefore, to gain the widest public approval; and to accomplish this aim, selection of recipients for scholarships and grants is based strictly on competitive scholastic tests among eligible children of the Sohio family.

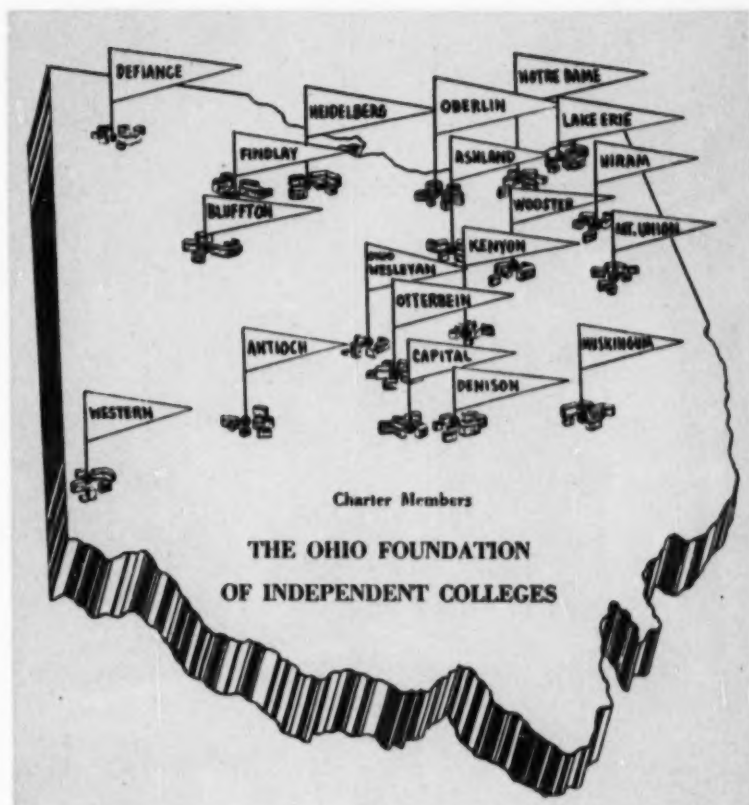
Open to all nontax supported Ohio colleges accredited by the Ohio College Association, the Ohio Foundation of Independent Colleges was recently organized to gain financial support for these institutions from industry and commerce in a single campaign, and to obtain their guidance in the management of the Foundation's affairs.

The Foundation provides the company with a worthy, nontax duplicating vehicle for use in administering a Sohio scholarship plan for the benefit of the Sohio family; at the same time, it enables the company to support liberal arts education in our principal marketing territory without selecting one institution and not another.

The Foundation's charter does not allow its funds to be used for capital expenditures, a stipulation which, it is understood, will not be amended without consultation with and approval by the company as long as this scholarship plan remains in effect.

Holding special interest here is the provision for supplementary contributions:

"The Ohio Foundation of Independent Colleges will receive from the Standard Oil Company (Ohio) a grant at the rate of \$35,000 annually toward the Foundation's general budget, less the cost of scholarships herein awarded, with the explicit agreement that in no case will such funds be used for capital expenditures. Grants to the Ohio Foundation are to be divided: (a) 60 per cent on an



equal pro rata basis amongst all participating colleges; (b) 40 per cent on an equal per capita enrollment basis."

Administration is exclusively the responsibility of the O.F.I.C., which has full authority to make rules governing the program and to make final decisions on all matters relating to it. The organization may modify these regulations or discontinue the program at any time.

While Sohio reserves the right to suspend or discontinue the plan at any time, the company expects to provide—when a scholarship winner is selected—support for a scholarship through the normal four-year period in which he would complete his study course. In the 1952-53 academic year five such scholarships were in force. The number of such scholarships, and the continuance of the plan, will be determined by the company in January for the succeeding academic year.

In appraising the plan as of today, we must remember that it is inextricably tied in with the O.F.I.C., which had to be created *before* such a plan could be established.

The first year—a warm-up period—provides no guide to future success.

However, indications in this, its second year, point to the probability that \$500,000, about half of the desperately needed goal, will be raised. But the Foundation must do better than that.

Two facts are encouraging. Some 75 per cent of this money will come from Cleveland and Akron, an area comprising about 25 per cent of the state's population. The same degree of understanding and generosity, if spread throughout the remainder of Ohio, would ensure the Foundation's success. Progress thus far has been slow.

Just as this plan is designed to help the 22 O.F.I.C. member liberal arts colleges, it is also intended to help Sohio. Many corporations are striving to find ways for establishing and evaluating the somewhat intangible values of the liberal arts college. This plan is the result of Sohio's efforts to do exactly that.

With competition for the contributor's dollars becoming more intense, corporations are certain to become correspondingly more selective in their giving. It is important now, and will be increasingly so, for those engaged in this field to cease emphasizing emotional appeals, and even lessen the reiteration of the needs of the colleges.



They All Love This Lady

***For 50 of Columbia University's
first 200 years, "Alma Mater" has given
first welcome to students,
many of whom have gone on to fame.
World leaders have been photographed beside her,
school children clamber over her, and
Lou Gehrig once landed a fly at her bronze feet.***

JOHN HASTINGS

Director of News Office, Columbia University

"We cannot think of this Alma Mater on a green slope before a country college. She represents rather the metropolitan university, symbolized by the best type of city womanhood; sane and strong, without doubt, but more conspicuously civilized, urbane, refined," to quote the Columbia University Quarterly, December 1903.

COLUMBIA UNIVERSITY'S "GRAND OLD lady" was 50 years old last September. The "lady" in question is the serene and graceful Alma Mater statue that sits in front of Low Memorial Library on the Morningside Heights campus.

It was on Sept. 23, 1903, that the "lady" was unveiled before a distinguished audience gathered in front of the library. She was "presented" to the throng that day by John Howard Van Amringe, dean of Columbia College, and "accepted" by President Nicholas Murray Butler.

WELCOMES NEW STUDENTS

Alma Mater has grown a little weather-beaten over the half century, but she still beckons in calm repose to the thousands of Columbia students who pass her post of honor each day. Hers is the first welcome to new students and one that lives perpetually in the hearts of alumni.

Alma Mater is one of the most photographed statues in the world. Columbia annually has more foreign students than any other American university and many of them have their photo taken with Alma Mater to send home. So do multitudes of American students.

Grammar school, junior high school, and high school students also make Alma Mater a rallying point for pictures each year when more than 4000 of them meet at the annual convention of the Columbia Scholastic Press Association. The old lady takes a bit of a beating from the youngsters as they clamber over her and drape their school flags over her shoulders.

Many a student who passed under her gaze went on to great success. She has looked benevolently upon such a cross section of Columbia scholars as Franklin D. Roosevelt, Louis Bromfield, James F. Cagney, Emanuel Celler, Bennett Cerf, Eddie Collins, Thomas E. Dewey, Maj. Gen. William (Wild Bill) Donovan, William O. Douglas, Paul H. Douglas, Paul Gallico, Rudolph Halley, Oscar Hammerstein II, Lorenz M. Hart, Richard Rodgers, Frank S. Hogan, William Jansen, Jacob K. Javits, Joyce Kilmer, V. K. Wellington Koo,

On January 16 of last year, President Eisenhower bade farewell to "Alma Mater" and became her president emeritus, moving on to still sterner duties. Here he stands beside President Grayson Kirk, who during this bicentennial year plays host to world scholars and public figures.

Harold R. Medina, Wayne Morse, Robert Moses, Karl E. Mundt, Carlos Romulo, H. Alexander Smith, and Herman Wouk.

Some of the world's leaders also have paid her homage over the years. Gen. Dwight D. Eisenhower, Columbia's 13th president, recognized her position of honor and had his first picture as university head made beside this tranquil lady. He also had his last in that capacity made there, on January 16 of last year.

PRESIDES OVER CEREMONIES

Numerous have been the convocations and commencements the good lady has presided over. Each June, when Columbia awards degrees to 5000 or 6000 students, Alma Mater becomes the focal point of the ceremony and is decorated with a finery of green shrubs.

World's notables have sat in front of her pedestal to receive honorary degrees. There was Marshal Joffre of France in 1917; Marshal Foch in 1921; Lord Halifax in 1941; Cardinal Mercier, primate of Belgium, in 1919; Francis Cardinal Spellman (then archbishop) in 1944; Eduard Benes, former president of Czechoslovakia, in 1939; Cordell Hull in 1934, and Ralph J. Bunche in 1950.

Other world leaders on visits to Columbia have been pictured with Alma Mater. These include: King George and Queen Elizabeth of England in 1939; Anthony Eden in 1952; Winston Churchill in 1946; the Archbishop of Canterbury in 1946; President Auriol of France in 1951; Albert, king of the Belgians, in 1919; Queen Juliana in 1952, and Gen. George C. Marshall in 1947.

In the early Twenties the lady had the unusual experience of seeing home run balls hit out of the baseball stadium on South Field land at her feet on the steps of Low Library. Only one person could ever hit a baseball that far. He was one of Columbia's most noted sons, Henry Louis Gehrig.

Thus with 50 years of great tradition behind her, Alma Mater is well



Photos by Manny Warman, Columbia University

prepared to assume the focal rôle in Columbia's bicentennial celebrations this year.

Only one-fourth as old as the university, the lady has her special tradition, too, which she keeps pretty well hidden. It's an owl, half hidden in the folds of her skirt. The question is often asked why the sculptor gave her the owl. Several explanations are available. M. Halsey Thomas, curator of Columbiana, the library housing historical material relating to the university, thinks it symbolizes the fact that wisdom (the owl is usually used as a symbol of wisdom) is hidden and must be sought out.

Dwight C. Miner, professor of history at Columbia and an expert on the university's past, has a somewhat different idea. The sculptor, the professor says, was a member of Psi Upsilon fraternity, whose symbol is an owl and the bird's presence may have been a bit of fraternity loyalty. Professor Miner also points out that Alma Mater represents Pallas Athena, the Greek

goddess. The owl was one of her symbols of office.

The statue was presented in September 1903 by Mrs. Robert Goelet and her son, Robert Goelet Jr., to commemorate Robert Goelet of the class of 1860. It is 8 feet high, weighs 4 tons, and is heavily plated with pure gold leaf toned to a dull finish. The figure of Alma Mater, robed in an academic gown, sits in a chair, elbows resting on the chair arms, both hands raised. A wreath adorns her head. An open book, from which her eyes are raised, lies in her lap. Her right hand supports a scepter surmounted by the crown of King's College (as Columbia was once known) and also the symbolic ears of wheat, and her left is extended in welcome.

The statue is placed on a plinth of green marble, this in turn on a granite pedestal. It was inspired by the figure of the university seal. Alma Mater is the work of Daniel Chester French, who created the statues of the Minute Man of Concord and John Harvard.

In Design, Let's Be Consistent—

with contemporary education, culture and construction

ROBERT W. TALLEY

Professor of Architecture, Alabama Polytechnic Institute

SOMETIME AGO I WAS CALLED UPON to prepare some data on architectural trends in the design of college buildings. As I studied the subject my suspicions were verified. Chaos exists in the realm of campus planning and building.

For example, one institution recently has completed, or has under construction, on its campus several buildings that are a modification of a classic style, several buildings that are a compromise between classic and contemporary design, and several buildings that might possibly be classified as contemporary in nature. This does not constitute a trend, unless this trend is designated as "confusion."

When Thomas Jefferson planned the early buildings for the University of Virginia, his approach was modern, his concept was functional, his objectives were positive. He envisioned a great university designed to meet the needs of a teaching staff and student body. No abstractions, either pedantic or architectural, haunted him. His argument for the plan and the form was not style or symmetry, but rather the obtainment of character and efficiency. The buildings were conceived as vigorous contemporary expressions.

The English, when adding quadrangles to their colleges or when planning new colleges in the Seventeenth Century, did not seek to reproduce the styles of the Thirteenth Century. Rather they produced architectural forms that were efficient and expressive of their time.

Then in the new world of the early Twentieth Century many American college campuses were developed with the aim of superficially recreating the atmosphere of the old colleges of England or of seeking outward respectability by copying one or another of the historic architectural styles. Admittedly, there often is credible beauty and charm in these Twentieth Century adaptations. But the inefficiency, the lack of logic and common sense, and the uneconomic construction and maintenance of these cemeteries of the past

demand a change of approach in college building design.

The change in approach was feeble. It was realized that changes need be made, but it was essential that the ghost of the past remain. Therefore the *modified style* manner was instituted. Style rather than character was and is the major objective of this approach.

BEAUTY ONLY SKIN DEEP

Let me use as an example of this trend one university that, since 1934, has constructed a number of buildings in a modified Renaissance style. In the administration building efficiency of circulation and the organization of the working areas have been sacrificed in order to achieve a "monumental pile" in appearance. In some of the classroom buildings the resulting exterior proportions are quite unpleasant as the result of an attempt to recognize the essential need for adequate lighting, ventilation and interior spatial requirements. Much money has been expended on tile roofs, applied exterior columns and pilasters, entablatures, useless balconies, and the like in an effort to create a lovely and respectable skin that hangs unrelatively to its skeleton and conceals many unpleasant internal organs. Truly here beauty, if this be beauty, is only skin deep.

This university is not unique in the solution of its architectural problems. The practice is common and constitutes a trend that is difficult to comprehend in light of contemporary educational philosophy. The university or college is the foundation of scientific and intellectual development, a leader in cultural achievement. It employs past knowledge as a foundation for new achievement. Yet many of the buildings in which such activity

is housed are but distorted and inefficient "shams" of past glory and express little hope of a future. In them even the beauty, the charm, and the refinement of the early Nineteenth Century imitations are lost.

Even more unfortunate is the tendency to construct buildings that are not a style or a modification of a style or contemporary in direction. For the lack of a better term I will refer to such a trend as the *compromise movement*.

The motivating forces of such a movement are several. First, there is the strong desire on the part of the administration or of a donor to appear progressive and up to date but also there is an equally strong fear of being labeled a liberal (quite a dangerous term in academic circles) should the building be conceived in a frank contemporary manner. Second, there is the desire to eliminate some of the expense of reproducing the historic styles. Third, the character of many college campuses is determined by earlier stylistic buildings. Campus unity is sought through the false premise of compromise.

Actually a distorted form resulting from the elimination of essential detail or by a change in proportions in order to use more economical forms or less material or the introduction of strained modified stylistic motifs produces only an illegitimate offspring of respected parentage.

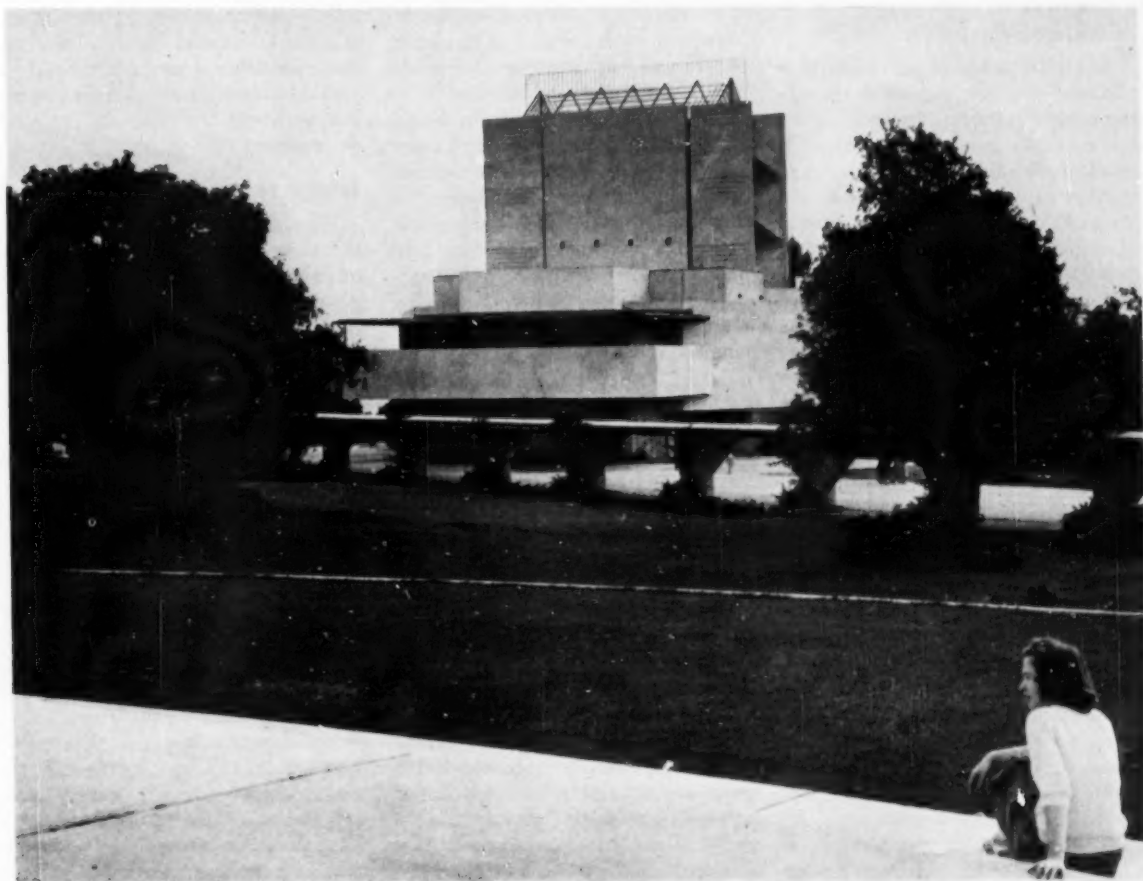
One university recently completed a library in which the interior treatment is sensitive in its recognition of physical and esthetic functionalism. However, a sense of conservatism and a desire for esthetic unity among buildings prompted an exterior expression that retains certain forms repetitious of the older buildings while omitting the historic detail that caused these

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Thomas Jefferson's approach was modern. The University of Virginia's early buildings were vigorous, contempor-

ary expressions, just as is Florida Southern's new campus "a return to reason" executed by Frank Lloyd Wright.



buildings to be excellent examples of a style.

This library, in its exterior features, is awkward in form. It not only belies the organic nature of the basic form and the commendable merit of its interior design but also fails to possess positive character and to become an integral element in the campus composition as successfully as do the stadium, the new engineering laboratory, or the nuclear physics laboratory, all of which are creative contemporary design.

Architectural compositional unity has never been achieved by compromise. For example, a new building erected on a college campus possessing a tradition of Gothic Revival architecture must capture the vitality and the dynamic nature of Gothic design. It loses such character when the design procedure is that of reducing molding profiles or modifying form essential to the true nature of Gothic design. Campus unity can best be accomplished by introducing intelligent creative contemporary buildings that express the underlying character and scale of the established design with contemporary materials and that satisfy the cultural demands of today.

COMPOSITIONAL UNITY

The south tower of the cathedral at Chartres was not conceived through compromise. It was designed in the contemporary manner of its time. It is distinctly different in detail and motif from the earlier north tower and the portals. Yet, through the control of proportion and scale and the use of materials, the result is one of complete compositional unity. The north nave arcades of the aisle and triforium of the English medieval Church of St. Albans are Gothic while the south arcades are Romanesque, yet compositional unity is exquisite. There was no compromise here when the north arcades were rebuilt after the original Romanesque forms had collapsed.

The desire to be up to date and modern has prompted the building of many superficially designed structures on college campuses that constitute another trend that I will label *modernistic*. As the suffix "istic" implies, this kind of design is one marked by the use of motifs, materials and details purely for the sake of being different. Structural forms, materials and motifs are strained beyond the limits of reason to obtain a novel effect.

As an example, stairs or portions of a building are often cantilevered when

no purpose is being served other than that of obtaining a novel design. Similarly, areas of glass curtain walls may be included in the design as a cliché which admit too much light to small rooms or create a serious maintenance problem in cleaning and breakage or eliminate desired privacy in certain areas. Likewise, steel columns and beams are exposed while the physical structural mechanics is being performed by a reinforced concrete frame that is not expressed. Also, solely for unique effects, materials are employed which are impractical with regard to durability or economy of maintenance.

ASSEMBLAGE OF CLICHÉS

I have heard such designs defended as expressions of the new industrial age and functional design. But if the buildings are analyzed they become nothing more than an assemblage of clichés in which the exterior and interior forms are not organically derived and coordinated with essential spatial and structural factors. As a result, the planning is not efficient and the chosen materials and motifs often lack overall unity of composition and fail miserably to integrate with the atmosphere of the campus. Novelty and mannerism have never been the basis of fine architecture, and they cannot be the foundation of fine college architecture.

This is a dangerous trend in design. Buildings motivated simply by a desire for novelty or a superficial modernism become either exceedingly restless in composition or they become static, sterile and monotonous in effect. Such buildings are inefficient psychologically as well as physically. They violate every fundamental principle of planning and composition.

I do not wish to imply that cantilevered forms, exposed steel columns, strip windows, and the like automatically constitute bad design. On the contrary, intelligently employed, they open a way to creativeness in architecture. The fine architecture of all past civilizations has resulted from lucid application of available building materials and construction knowledge.

The final trend to be considered is one that might be referred to as *too much for too little*. Economy and efficiency must not be confused with cheapness. Beyond certain limits of cost, quality of construction and design merit are sacrificed. This practice of attempting to build beyond financial means is the curse on contemporary architecture.

In recent years universities and colleges have found urgent need to expand physical plants with limited funds. Efforts have been made to plan buildings that include more space than can reasonably be constructed for the funds available. As a result, buildings are erected of inferior materials and lack the refinements, comforts and design quality conducive to intellectual, cultural and scientific achievement. Bare, noisy, unfriendly and inhuman physical forms surround the teacher and the student. Initiative and imagination are directly decreased. A sense of restlessness and an attitude of cursory training are initiated.

Furthermore, many of these cheap buildings will within a relatively short span of years become a tremendous burden on the institutions because of abnormal maintenance expense. Cheapness cannot result in efficient architecture, either physically or psychologically.

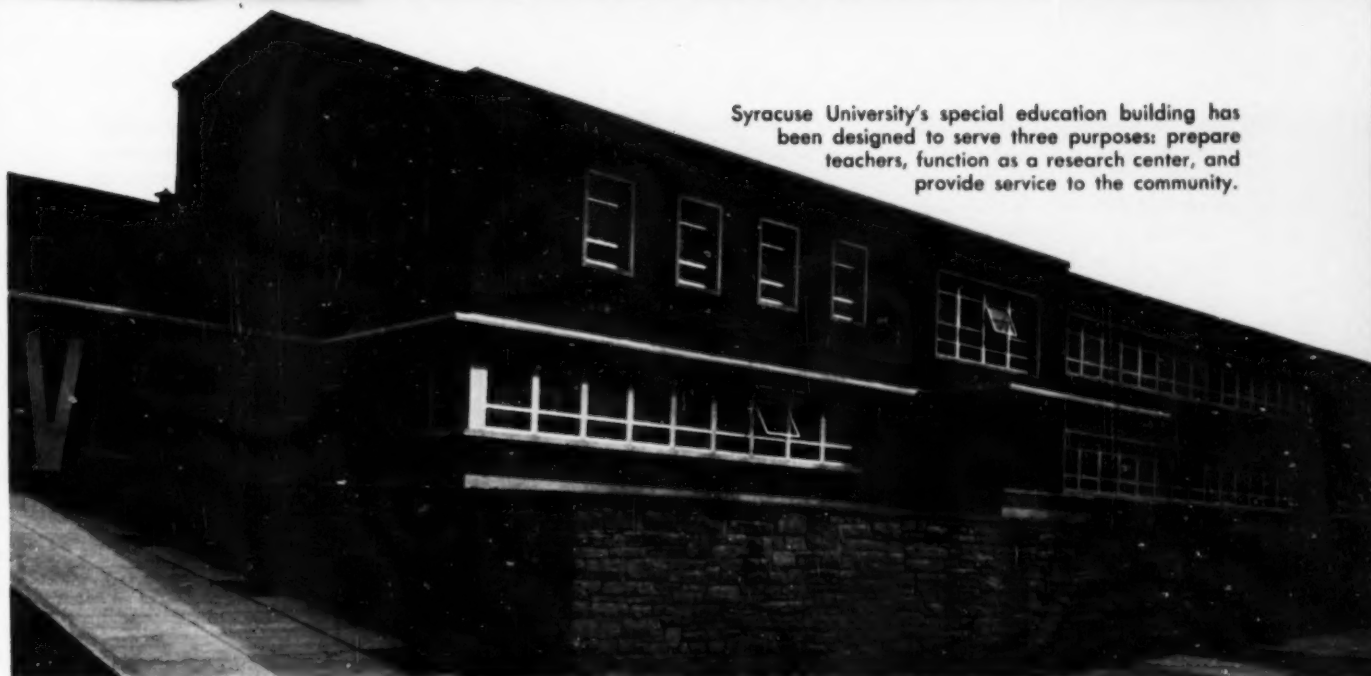
The deed has been done, and perhaps unavoidably. But it is now time that positive direction be given to the planning of future buildings. This direction must recognize the objectives and physical requirements of academic educational philosophy by making intelligent use of contemporary construction materials and methods in order to plan creative organic buildings consistent with the physical and cultural environment.

RETURN TO REASON

While the momentary results represent chaos, there is evidence of a return to orderly direction. In quantity such examples do not constitute a trend, yet they do imply a return to reason in the design of college building.

This return to reason is illustrated by such buildings as those at Florida Southern College, the pharmacy building and proposed campus plan at Drake University, the architecture building and library at Georgia Institute of Technology, the fine arts building at the University of Arkansas, the stadium of Rice Institute, and a limited number of structures of certain other college campuses.

The argument underlying the design of such buildings is not a desire for style or symmetry or abstractions of a pedantic nature but a striving for character and efficiency consistent with contemporary education, culture and construction. The approach is modern, the concept is functional, the objectives are positive.



Syracuse University's special education building has been designed to serve three purposes: prepare teachers, function as a research center, and provide service to the community.

Special education building at Syracuse features

"Floating Rooms" for Hearing and Speech Center

GERTRUDE H. DOREY
Feature Editor, Syracuse University

THE NEW SPECIAL EDUCATION BUILDING on the Syracuse University campus is attracting the interest of educators across the country since it is the first to be constructed in such a way that it serves three functions at once.

Previous special education buildings—and there are only a handful in the country—were planned primarily as demonstration schools. Syracuse University educators believe, however, that research and service to the community are an integral part of their special education program. The new \$400,000 building, therefore, provides both formal and informal classroom space, research facilities, and a hearing and speech center.

Beauty is combined with utility in the building, erected a block away from the main campus. Long expanses of window band the 153 foot building, which is faced with red brick trimmed with limestone. The main canopy projects 11 feet over the plate glass entrance. It was constructed as part of

the concrete frame of the building and requires no additional supports. The canopy over the north entrance, held up by interesting V-shaped supports, protects patients from the time they step out of their cars until they enter the building.

A waiting room for visitors and parents of patients is incorporated into the lobby of the building. Filled oak paneling with a natural wood finish is used on the lobby walls. Color is introduced into the room by means of the turquoise and yellow plastic simulated bamboo seat coverings on the wrought iron chairs, and by the original oil paintings in the room and in the adjacent corridors. An appealing photograph of two youngsters, enlarged to 5 feet 10 inches by 7 feet, dominates one wall.

Every room is individually decorated. Fifteen vibrant colors are used in the building, including russet, forsythia, silver birch, Brittany blue, dew mixture, and twilight turquoise. The

color scheme was chosen jointly by Dr. William M. Cruickshank, director of special education; Norman Rice, director of the university's school of art, and Dr. Mildred M. Landis, professor of art education.

Furniture in waiting rooms, the director's office, and staff lounges also is of wrought iron covered with plastic in attractive colors. Standard furniture, painted metallic gray, is used in classrooms, playrooms and therapy rooms.

The 43 rooms in the building were carefully planned by Harry A. and F. Curtis King, Syracuse architects, after a large amount of research and many consultations with members of the faculty of the special education department. Their work was complicated by the fact that many of the rooms are used for multiple purposes.

For example, a one-way glass window separates a classroom and a laboratory on the first floor, making it possible for college classes, without being seen or heard, to observe children as

they receive auditory training. The instructor, who may be working with deaf children in the adjoining auditory training room, can explain his methods by using a microphone with amplification. If he wishes, he can divide the laboratory by using a sliding glass accordion type of door, so that the youngsters with whom he is working can receive lip reading instruction.

The second floor contains a number of unusual rooms, including two "floating rooms," so named because

they are almost completely separate from the building in which they are.

The smaller of the two rooms, which is the most completely soundproof, weighs about 6 tons and the interior dimensions are 9 feet 9 inches by 11 feet 7 inches. In order to construct the room, a slab of reinforced concrete was "floated" above the structural concrete floor by means of steel springs, encased in telescoping metal sleeves. Rock wool insulation was placed between the main structural

slab and the slab supported by springs. Rock wool was used again to encase the vibration dampeners on top of the concrete slab. Resting on top of the vibration dampeners are wood supporting members, insulation board, plywood, a sponge rubber pad, and a carpet.

Sounds that might ordinarily be expected to penetrate from the outside of the building through the walls are stopped by the many measures taken to separate the room from the masonry wall. The sandwich type of construction includes insulation board, air space, two by fours, hardboard, air space, hardboard, wood studs filled with 4 inches of fiber glass, and a perforated cement asbestos board wainscoting 3 feet 6 inches high topped by batten strips and bronze screening. Construction of the room was also planned in such a way as to eliminate the reflection of sound.

The air-conditioning ducts leading into the room created a problem, for sound could also enter through this source. As a protection, the unit was suspended from the ceiling by springs. Each duct was lined with 3 inches of sound absorption padding, held in place with chicken wire. At intervals felt filters were suspended in the ducts in a staggered pattern in order to baffle the sound.

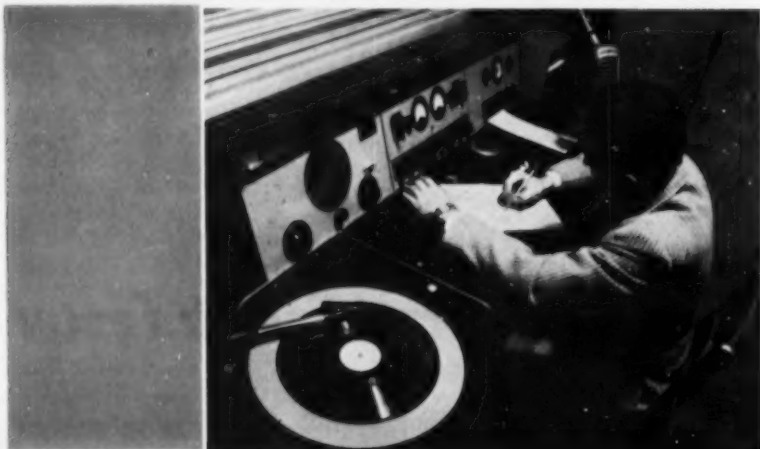
The electronics consultant, William Stanmyre of Syracuse, who planned the "soundproof" rooms in conjunction with the architects, hoped to be able to reduce the sound penetrating the room to 20 decibels for almost complete absence of sound is needed if hearing aids are to be evaluated and fitted. He was completely successful, for the noise level in the room is even lower.

The larger room, 17 feet 8 inches by 14 feet 10 inches, is constructed on similar principles and is used to evaluate the hearing of infants, for recording purposes, and electroencephalographic research (research dealing with the patterns made by brain waves). The electronics consultant worked to reduce the sound in this room to 30 decibels, but succeeded in getting it below 24 decibels.

Control rooms adjacent to the soundproof rooms, however, can create almost any sound in the rooms that the ear can experience.

Although the building contains 43 rooms—29 major rooms, 13 modified speech and audiometric testing rooms, and nine individual speech therapy

Top: Patients being tested in the smaller of the two floating rooms hear only the sounds sent into the room by this operator.
Bottom: Larger of the two floating rooms in the new building is used for research projects and for service to the community.



rooms—only two in the building have been set up as formal classrooms. All the major rooms serve one or more purposes. Offices double as therapy rooms; rooms that provide clinic facilities also serve as informal classrooms and may be used for research purposes.

Among the features of the building is the three-room medical diagnostic suite in which two physicians can work at one time by separating the main room with a curtain. Two rooms, designed principally for research purposes, can be used in other ways by dividing each into two areas by means of leather-like accordion type of doors.

A room in which emotionally disturbed children receive therapy required special planning, for the aggressive child may decide to spatter paint or pour water on the floor. A waterproof membrane was placed beneath the tile floor of the room, and ceramic tile was used for the walls.

WATCH THERAPIST WORK

Students can watch a therapist work with a youngster in this room through a small observation room constructed of one-way glass. From the same observation room they can look into a children's playroom and observe play or speech lessons without being seen.

Half of the area under the building is used for a finished basement. It contains janitors' rooms, houses the heating unit and electrical and other types of equipment, and is used for the production of psychological and electronic equipment. A small penthouse contains the elevator and air-conditioning unit.

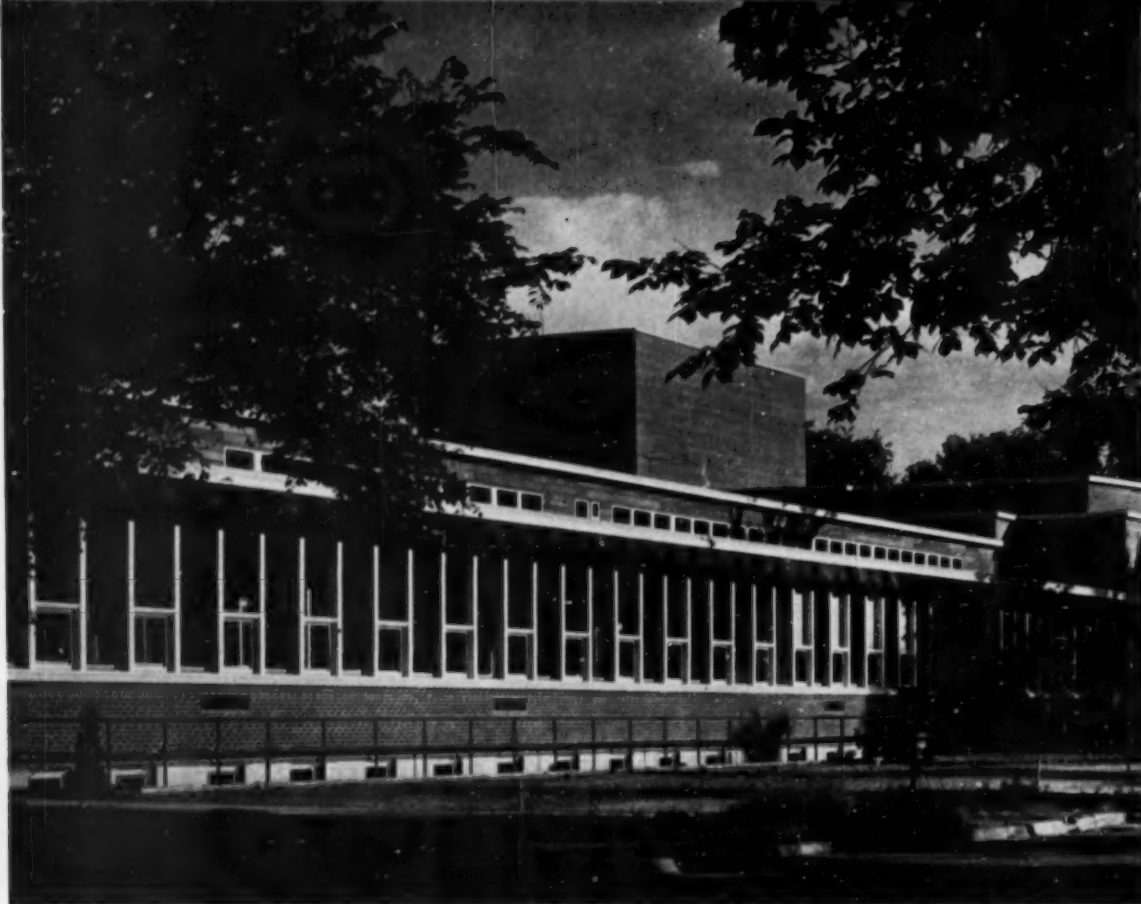
The landscaping of the building created special problems for Prof. N. A. Rotunno of the university's architecture faculty, who planned the projects in consultation with the Olmstead Brothers of Boston. Since the building is located on a sloping site, the terraced area in front is almost at street level on the south side, and nearly six feet above the sidewalk on the north side. A random ashlar wall features the use of limestone from Ithaca, N.Y. Bluestone from Deposit, N.Y., is used for the top of the retaining wall, and for treads and walks.

The automobile entrance is located at the side of the building which is highest above street level but is planned in such a way that the entrance appears to be an easy grade. No steps could be used at this entrance, since it is sometimes used by wheel chair patients.



Above: Lobby of Syracuse's special education building includes a corner used as a waiting room by relatives of patients. Main office can be seen through the glass window in the center of the picture. Below: College students can watch the work going on in the auditory training room through a one-way glass window seen at the left of the picture. Sliding doors have been installed to divide the room.





Multi-Use Building, Wisconsin State College, Eau Claire

Primarily, It's a Laboratory School

but there are a theater, gymnasium and college classrooms, too

W. R. DAVIES

President, Wisconsin State College, Eau Claire

ON THE CAMPUS OF WISCONSIN State College, Eau Claire, a new laboratory school building has recently been completed at a cost of \$1,450,000.

Designed by Eschweiler and Eschweiler of Milwaukee, the building is L-shaped and actually houses four relatively separate units, some of which are definitely multipurpose in character: the college elementary school; a little theater for dramatics, public gatherings and the elementary school; a classroom unit to house the college classes in education, psychology and speech; a physical education unit designed to serve the men and women of the college as well as the children

of the campus school. The building was designed especially to be a professional school for the preparation of teachers.

The elementary unit consists of eight classrooms, a kindergarten suite, an elementary school office, a faculty lounge, and children's toilets. Each classroom has its own project room and an office for the room supervisor, with glass partitions affording easy supervision of the entire unit. The glass between the supervisor's office and the main classroom unit is one-way. Kindergarten and Grades 1 and 2 have their own cloakrooms; corridor lockers are provided for other groups.

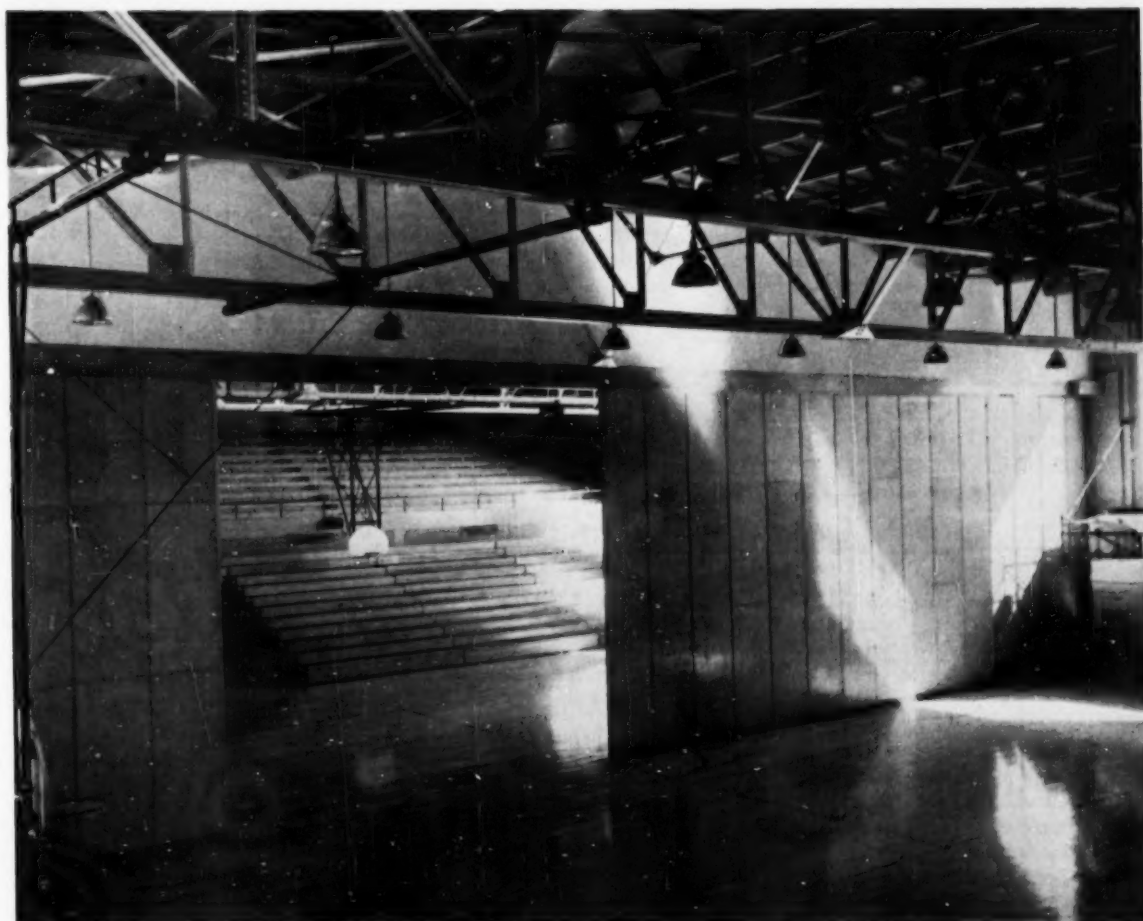
Between 4 foot modules one entire side of each classroom is glass, with a similar battery of shorter clerestory windows to provide excellent natural lighting in rooms that are some 26 feet in width. Walls are cinder block, woodwork is blond birch, and floors are asphalt or rubber tile in a variety of colors. A 4 foot overhang keeps out much direct sunlight. Window shades roll upward to control glare and sunlight, and draperies are provided for room darkening. Corridor wainscoting is ceramic tile, floors are asphalt tile, ceilings are acoustically treated.

Controlled incandescent lighting is used throughout this unit, with a sin-

Right: Observation deck above the main corridor in the elementary unit. Accessible by two controlled stairways, the observation deck has one-way glass virtually the full length on both sides looking down into each classroom. Microphones carry sound to the observation deck.



Below: The gymnasium has a central playing floor 100 by 120 feet. An electrically operated folding partition divides the floor into two equal courts of standard college basketball size. Portable fold-away bleachers provide seating for 1500; permanent bleachers seat 1200.

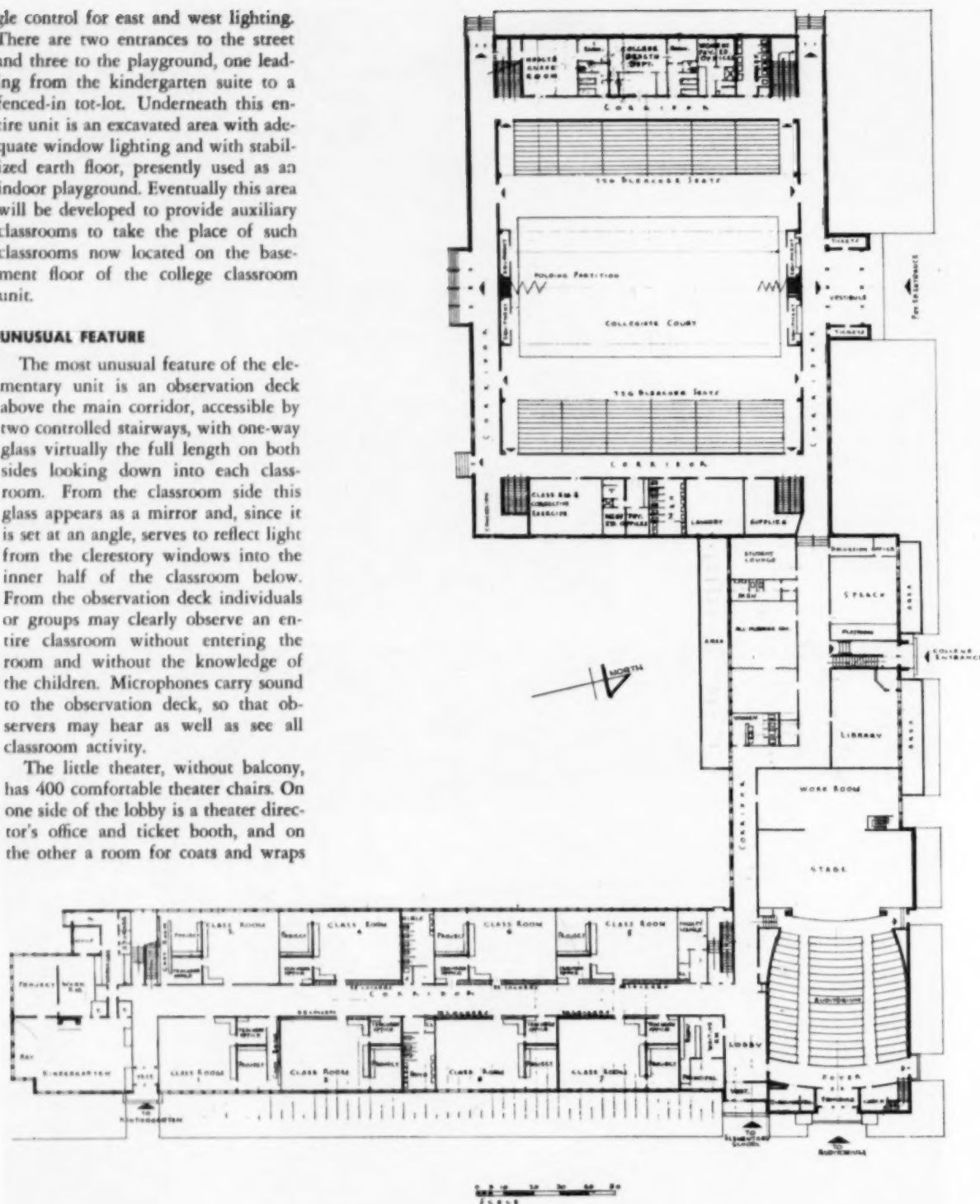


gle control for east and west lighting. There are two entrances to the street and three to the playground, one leading from the kindergarten suite to a fenced-in tot-lot. Underneath this entire unit is an excavated area with adequate window lighting and with stabilized earth floor, presently used as an indoor playground. Eventually this area will be developed to provide auxiliary classrooms to take the place of such classrooms now located on the basement floor of the college classroom unit.

UNUSUAL FEATURE

The most unusual feature of the elementary unit is an observation deck above the main corridor, accessible by two controlled stairways, with one-way glass virtually the full length on both sides looking down into each classroom. From the classroom side this glass appears as a mirror and, since it is set at an angle, serves to reflect light from the clerestory windows into the inner half of the classroom below. From the observation deck individuals or groups may clearly observe an entire classroom without entering the room and without the knowledge of the children. Microphones carry sound to the observation deck, so that observers may hear as well as see all classroom activity.

The little theater, without balcony, has 400 comfortable theater chairs. On one side of the lobby is a theater director's office and ticket booth, and on the other a room for coats and wraps



FIRST FLOOR PLAN OF LABORATORY SCHOOL BUILDING AT WISCONSIN STATE COLLEGE, EAU CLAIRE

for patrons. Above these rooms and the lobby are two speech studios with clear glass windows overlooking the theater; between them is a broadcasting and projection booth. The stage

proper is 28 by 55 feet, and is backed by a 22 by 51 foot workroom. The stage is complete with gridiron, stage rigging, and the latest type of indirect footlights. The most modern devices

in stage lighting have been incorporated by Dr. Fuchs of Northwestern University, consultant to the building architect.

Underneath the stage and workroom



The little theater has 400 comfortable theater chairs. The stage, complete with gridiron, stage rigging, and

the latest type of indirect footlights, is 28 by 55 feet, and is backed by a 22 by 51 foot workroom.

are completely equipped makeup rooms, dressing rooms, storage rooms, and toilets, made accessible to the stage workroom by a permanent stairwell. Adjacent to these rooms is a manual arts room with a trap door in the ceiling through which staging and other materials may be lifted into the workroom. A roll-away door from the workroom makes it possible to bring in stage materials from an outside driveway.

CLASSROOM UNIT

On the upper floor the college classroom unit houses two education, two psychology, and two curriculum laboratory rooms as well as half a dozen offices. The main floor has a children's library, a speech classroom, an audio-visual room that can be separated into two rooms by a collapsible curtain, a student lounge, and toilets. On the basement floor are the auxiliary rooms to the campus school, consisting of a combination home economics and lunchroom, a music studio, a science demonstration room, an art classroom,

and the manual arts room mentioned earlier. Construction in this unit is comparable to that of the elementary school, except that fluorescent lighting has been used in the rooms on the two upper floors. Colors in this unit as well as in the elementary school are varied even within a single classroom, and were selected by the director of the art department of the college. Green glass chalkboards and cork bulletin boards have been used throughout the building.

The health and physical education unit includes a central playing floor 100 by 120 feet completely surrounded by a corridor from which there are a number of single or multiple entrance doors, and a front lobby with ticket booths on either side. An electrically operated folding partition divides the floor into two equal courts of standard college basketball size. Storerooms for mats are located on either side of the partition housing.

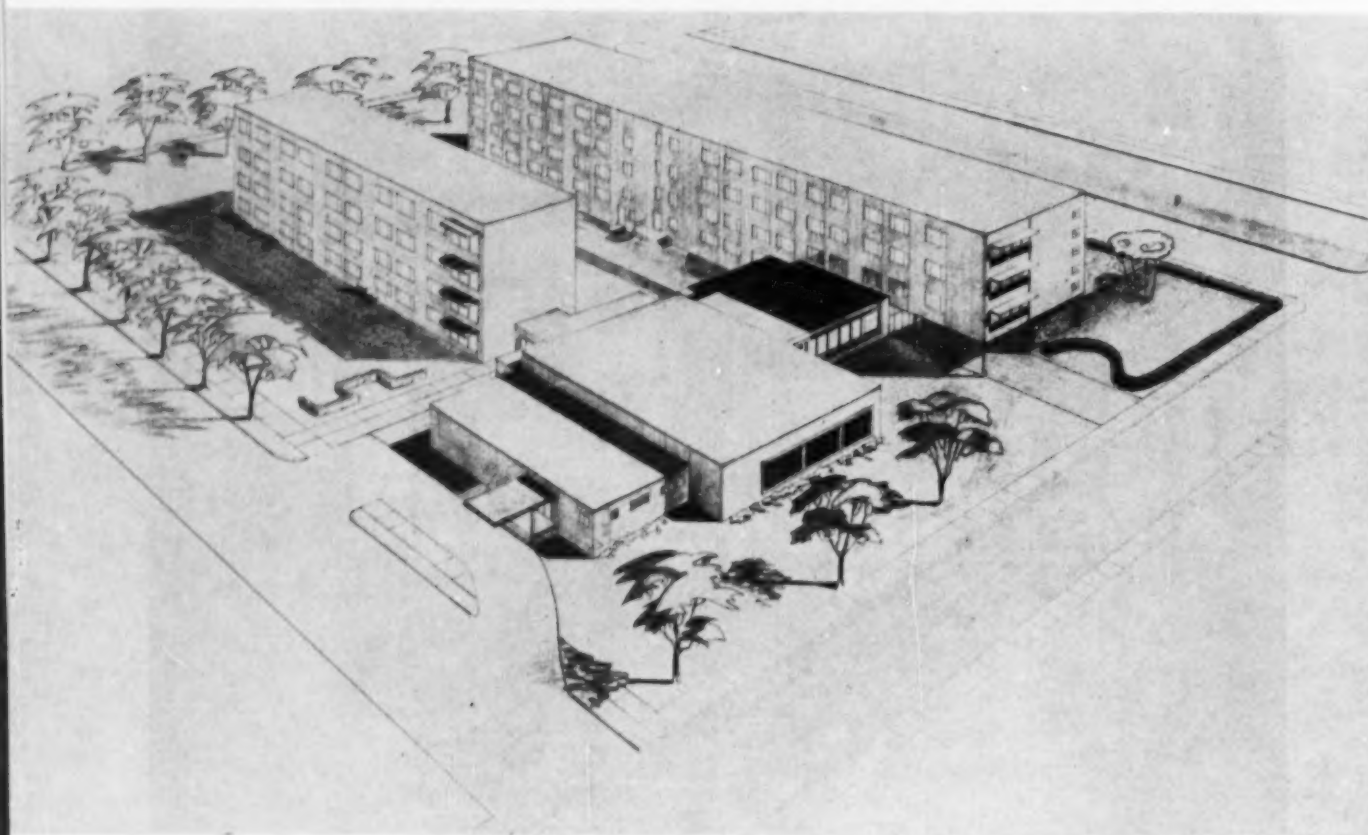
Portable fold-away bleachers are located on both sides of the large court and provide seating for 1500 specta-

tors. Permanent bleachers seating 1200 are built above the east and west corridors and the outer rooms of the physical education unit. Directly beneath these bleachers are the locker and storage rooms, one flight above the corridor and gymnasium floor. Beneath these rooms and off the corridors are the college health suite, physical education offices, corrective exercise room, health classroom, laundry, storage and toilet rooms.

SERVES ITS PURPOSE

The building serves admirably in providing the facilities for which it was designed. Lawns, playgrounds and parking facilities also have been developed.

Rooms formerly used in the old main building have been remodeled to provide college classrooms, offices for staff and administration, and improved college food and recreational facilities. The heating plant of the college likewise has been expanded and improved to handle the doubling of the college facilities.



Residence Hall at Montana State

***is first permanent dormitory on campus
and occupies an entire city block***

SIGVALD BERG
Architect, Helena, Mont.

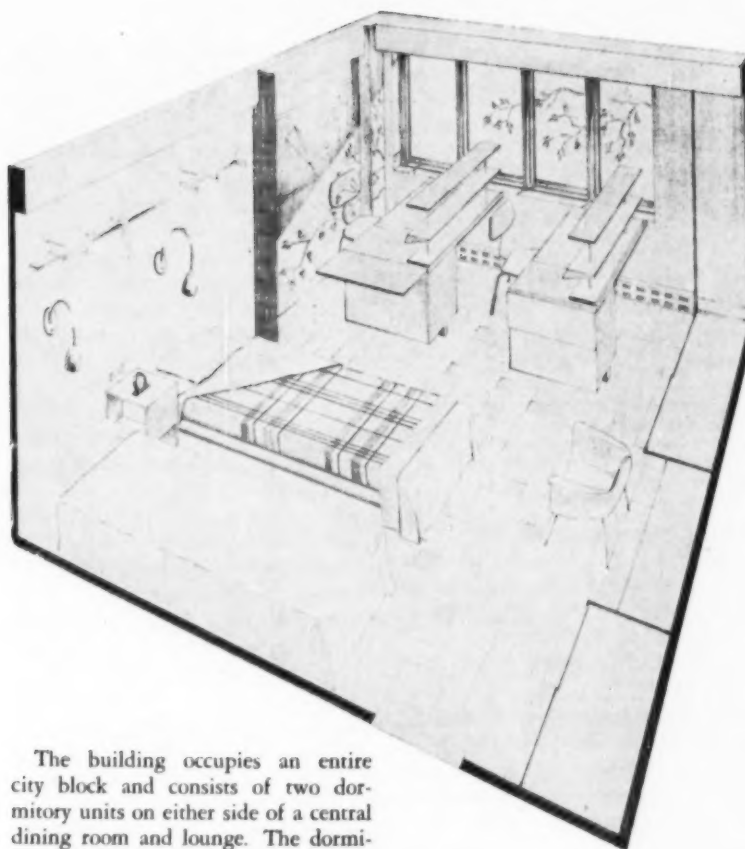
MONTANA STATE COLLEGE AT BOZEMAN has under construction its first permanent residence hall for men, replacing the large temporary wood frame Hudson Hall and a few other temporary dormitories of the wooden barracks type. Approximately 317 men students will be housed in the building, there being 27 single rooms and 145 twin-bed rooms, plus two guest rooms and the director's apartment.

This construction project is being financed by a direct loan from the

federal government under the Housing Act of 1950 for educational buildings. The loan is to be repaid over a 40 year period out of net earnings and income from room rents and meal service. No state funds are being used in financing the construction.

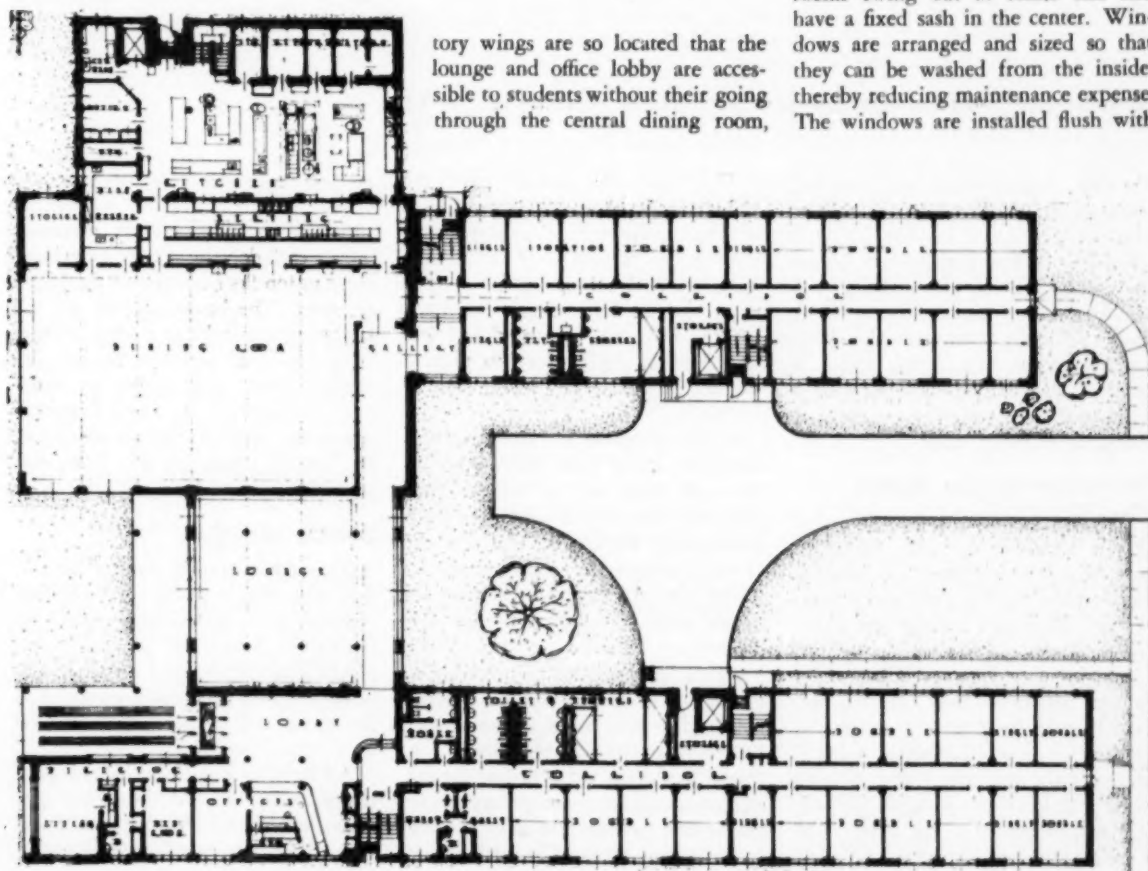
Construction costs, including kitchen equipment, built-in wardrobes in the students' rooms, and all outside utilities, but not including architect's fees or movable furniture and equipment, is expected to exceed \$1,000,000.

The structure is of fireproof, reinforced concrete, with exterior walls of exposed architectural concrete (to be painted a warm color) and with certain window spandrels of terra cotta veneer. The first story wall at the main entrance has been veneered with varicolored sandstone sheltered from the weather by free standing concrete columns. Of contemporary design, the building has been designed for earthquake-seismic Factor No. II, which is considerable for this area.



Left: Typical double room in men's residence hall now being built at Montana State College. Below: First floor plan shows the two dormitory units on either side of a central dining room and lounge.

The building occupies an entire city block and consists of two dormitory units on either side of a central dining room and lounge. The dormi-



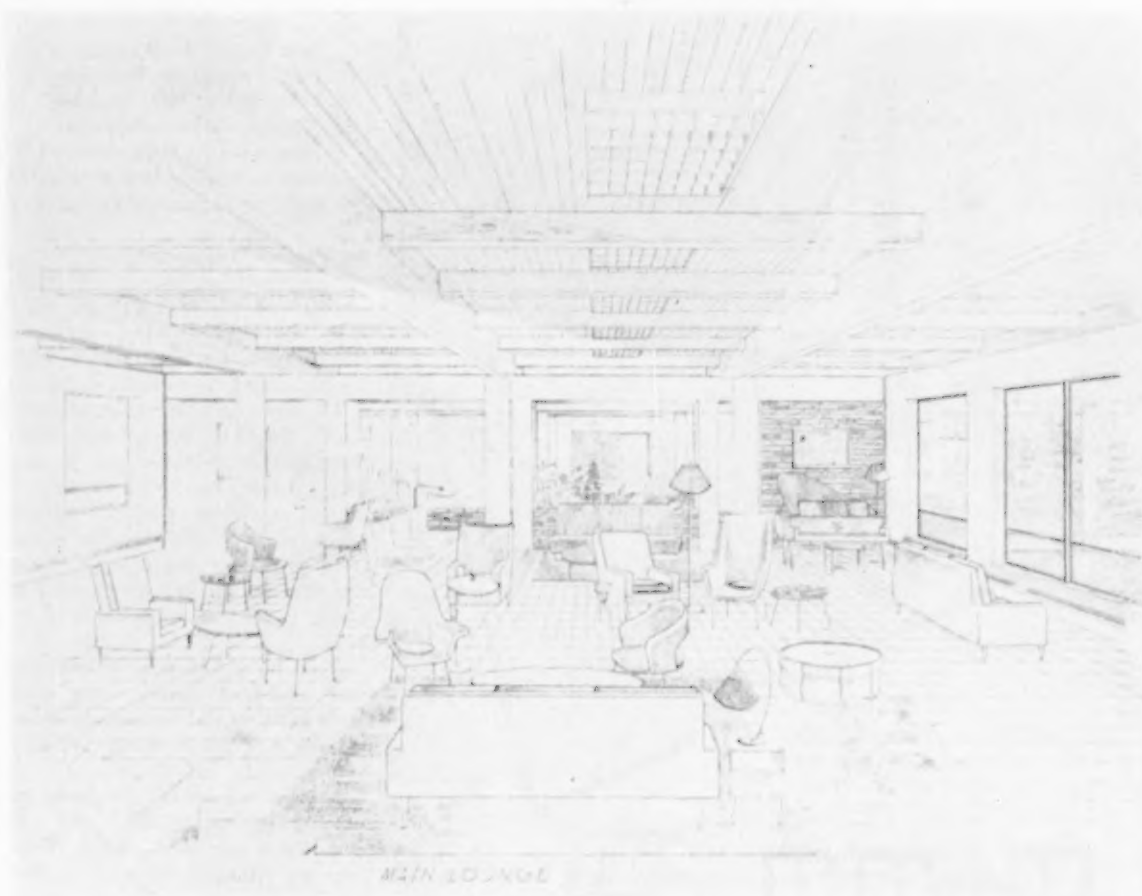
tory wings are so located that the lounge and office lobby are accessible to students without their going through the central dining room,

yet during meal service, the dining room is related to the smaller dormitory unit so that cross traffic is eliminated. A gallery area has space for coat and hat racks for students who come directly from the outside for meals.

The three building units are separated structurally by earthquake fracture joints so that there will be freedom of movement without evident damage to interior or exterior surfaces of the buildings. This jointing is provided by copper slip flashing at the roof line and by deep corrugations in copper flashing at the juncture of the walls.

Windows and all exterior entrances have aluminum frames; some glass block windows and ventilators are being used in private bathrooms and stair towers.

Caseament windows in the dormitory rooms swing out at either end and have a fixed sash in the center. Windows are arranged and sized so that they can be washed from the inside, thereby reducing maintenance expense. The windows are installed flush with



Main lounge in Montana State College's first permanent residence hall for men.

the face of the exterior walls, producing a clean, unbroken, façade without shadows.

Sliding shades in aluminum frames and tracks will be installed for each window in the dormitory rooms. These shades are made of fireproof glass fiber, are translucent, and slightly amber in color. They can be cleaned with a damp cloth and will take the place of draperies or other shades.

CONVENIENT INGRESS, EGRESS

The concrete stairways are placed at proper locations in each dormitory unit for convenient ingress and egress. Steps and landings are of nonslip quarry tile. Walls and ceilings are of exposed concrete, which will be painted.

Interior partitions are 2 inch solid gypsum plaster on steel channels and metal lath in the dormitory wings; the ceilings are exposed concrete painted, except in the corridors where acoustic tile will be installed. Acoustic tile ceilings will be placed in the lobby, food serving room, and kitchen.

The roof construction over the lounge, dining room, and serving room is wood supported by exposed laminated beams and exposed striated solid wood sheathing to be painted warm, harmonious colors. All roofs will be completely insulated and will have interior drain pipes to prevent freezing during the severe winter months.

A wall of varicolored sandstone separates the lobby from the lounge. In this wall, there will be copper lined boxes for plants and flowers. The walls surrounding the kitchen and one end of the dining room are of structural glazed tile. All exterior walls are insulated and furred with metal lath and plaster.

Floors throughout the dormitory rooms and corridors will be covered with asphalt tile; floors in the shower and toilet rooms will be ceramic tile. Quarry tile floors are specified for the lobby and dining room gallery, while greaseproof asphalt tile is to be laid in the dining room. The kitchen and

serving room will have ceramic tile floors.

There are three freight elevators, one in each dormitory wing from basement to top floor and one in the kitchen wing. The basement plan for the kitchen wing includes a large storage room for food supplies, toilets, mechanical room, and compressor room. Each dormitory wing has a basement recreation room, ski storage room, toilet, laundry room, janitor's room, and mechanical room.

CENTRAL HEATING

The central heating plant of the college will supply steam for baseboard radiators with temperature control by individual thermostats in each room. Mechanical ventilation has been specified for shower and toilet rooms, dining room, and kitchen. There will be no air conditioning.

All lighting will be by incandescent lamps, except in the dormitory corridors, which will have slimline fluorescent tube, egg-crate fixtures. An edge

light plate glass handrail panel is indicated for the marble stair landing in the lobby. The face of a bobcat, the mascot of the college, will be etched on the glass, which will be reflected by the edge lighting.

Each dormitory room has been wired for a call buzzer from the central office and also has been separately wired for an intercommunicating telephone system to the main office in the lobby. Public telephones will be located in the lobby and in the corridors on each floor.

Many plan studies and preliminary sketches were made in determining the size of the kitchen and the proper arrangement of the equipment, and we believe that an efficient kitchen plan has resulted, obviating much cross traffic. All equipment will be stainless metal. A dishwashing room off the kitchen and dining room will eliminate noises disturbing to the students.

WASTE DISPOSAL

Kitchen and dining room wastes are to be disposed of by garbage grinders to the sewer. Cans, broken glass and kitchenware will be hauled away in containers that will be steam-cleaned and sterilized before being returned to the kitchen and dishwashing room for reuse.

The dietitian has been assured full view of the kitchen from her office, and the preparation and serving of 317 or more students at each meal should proceed in an orderly and efficient manner.

The refrigeration rooms are near the rear entrance for convenient delivery of perishable foods. There will be cooler rooms for dairy foods, meats and vegetables, and also a quick-freeze room.

A few special features are of particular interest. A metal enclosed cabinet with perforated metal doors is being installed over the heat pipes in each dormitory room where hand towels and wash cloths can be dried out and still be out of sight.

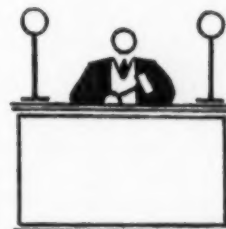
A sliding curtain will be installed between the bed space and the study area in the double rooms, giving a certain privacy to the students. Each student in a double room will have his own wardrobe and set of built-in dresser drawers.

Construction of this project is now under way and college authorities are hopeful that occupancy can take place next fall.

The College Professor and the Fifth Amendment

T. E. BLACKWELL

Vice Chancellor and Treasurer
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Part 2

PRIOR TO THE SMITH ACT OF 1948,⁸ active membership in the Communist party was not, in any respect, a criminal offense. Consequently, a witness, questioned as to his affiliations with the party, could not claim the protection of the Fifth Amendment in refusing to reply. However, the Smith Act made it a crime to advocate, knowingly, the desirability of overthrow of the government by force or violence or to be or to become a member of such a group with knowledge of its purpose.

REFUSAL TO TESTIFY UPHOLD

It was therefore possible for Patricia Blau, questioned by a grand jury as to the extent of her participation in the work of the Communist party of Colorado, to invoke the protection of the Fifth Amendment. Her refusal to testify was upheld by the Supreme Court of the United States in 1950.⁹

Justice Hugo Black, delivering the opinion of the court, declared:

"She reasonably could fear that criminal charges might be brought against

her if she admitted employment by the Communist party or intimate knowledge of its workings. Whether such admissions by themselves would support a conviction under a criminal statute is immaterial. Answers to the questions asked by the grand jury would have furnished a link in the chain of evidence needed in a prosecution of the petitioner."

Within less than a month after this decision of the U.S. Supreme Court, a federal judge in Hawaii freed 39 witnesses convicted of contempt for refusing to answer similar questions propounded by a House committee conducting hearings in Honolulu. The next month a federal judge in Washington ordered the acquittal of Harry Russell, the first witness cited for contempt in this connection. The year 1952 saw a repetition of these mass acquittals.

They aroused a strong demand for the enactment of a new immunity statute to replace the ineffectual one of 1862. This new legislation has been sponsored and vigorously championed for the last two years by the Democratic senator from Nevada, Pat McCarran, former chairman of the Senate internal security subcommittee. The bill (S. 16) was passed by the Senate on July 9, 1953, on a show of hands, and it is now pending in the House, which is expected to pass it in the next session. However, many influential members of Congress are strongly opposed to this proposed legislation.

⁸18 U.S.C. Para. 2385.

⁹Blau v. U.S. 340 U.S. 159 (1950). See also: U.S. v. Josephson 165 F. 2d. 82 (1947) Cert. den. 333838. Lawson v. U.S. 176 F. 2d. 49 Cert. den. 339 U.S. 934, 972. U.S. v. Bryan 339 U.S. 323 (1950). Brunner v. U.S. 190 F. 2d. 167; 343 U.S. 918. Hoffman v. U.S. 341 U.S. 479. Rogers v. U.S. 340 U.S. 367. Adamson v. California 332 U.S. 46. Nebraska Law Review 27: 465-67 (1948). Journal of Criminal Law 41: 618-38 (1951). Marquette Law Review 35: 282-95 (1952). Michigan Law Review 49: 775-86 (1949).

Clyde R. Hoey, one of the senators from North Carolina, has declared:

"I am opposed to the entire bill. I believe we are going right in the face of the Constitution. We are undertaking to say that a committee of Congress can do what the courts cannot do. The courts can grant immunity, but they cannot force a witness to testify against himself."

Although the bill purports to grant complete immunity to witnesses from prosecution for any act or fact to which they testify, thus compelling the witnesses either to talk or to face imprisonment on contempt citations, many legal scholars believe that the act would be declared unconstitutional on the same grounds that rendered the 1862 legislation ineffectual. To be upheld by the courts, the degree of immunity granted must be as broad as that embraced in the Fifth Amendment itself. Since the federal government cannot grant immunity from prosecution under state legislation, a witness might still be able to claim the right to remain silent on the grounds that his testimony would open the door to prosecution under state laws.

It should be emphasized that the Smith Act of 1950 did not outlaw the Communist party. The Federal Bureau of Investigation has consistently opposed such legislation, since it would tend to drive the party underground and thus make it more difficult for J. Edgar Hoover and his staff to keep track of its workers. The Internal Security Act of 1950 provides:

"Neither the holding of office nor membership in any Communist organization by any person shall constitute, per se, a violation of this section or of any other criminal statute."

MEMBERSHIP NOT ENOUGH

Thus, membership, of itself, is not enough. There must be not only membership but also knowledge of the purpose of the party to advocate the desirability of the use of force or violence to overthrow the government.

In October and November of 1952, two associate professors, three assistant professors, and an instructor in three of the municipal colleges of the City of New York were called to testify before a Senate committee investigating subversive influences in higher education. When confronted with the question of their relation to communism and the Communist party, they refused to answer on the grounds that their replies might tend to incriminate them.

They were promptly discharged from their teaching positions on the basis of the provisions of Section 903 of the New York City Charter:

"If any employe of the city shall refuse, before any legislative committee, to testify or answer any question regarding the official conduct of any employe of the city on the ground that his answer would tend to incriminate him, his term of office or employment shall terminate and . . . he shall not be eligible to employment by the city."

REINSTATEMENT REFUSED

The faculty members thus discharged filed a petition for reinstatement, contending that education is a state, not a municipal, function and that they were therefore not employes of the city of New York. The court, in rejecting their petition for reinstatement,¹⁰ reasoned that there is nothing in the federal Constitution that makes education solely a function of the state; that the legislature has ample authority to delegate to boards of education the local operation of a school system.

In the Daniman case, the court had this to say:

"When the officials of these boards, whose duty it is to safeguard the children from being debauched mentally and morally, find that their teachers are putting on this false show of indignation on being exposed as apparent enemies of the nation, and are falsely claiming to be immune to questions that go to the roots of their honesty and loyalty, and that, when questioned, they will not say yes or no to whether they belong to a group generally regarded as godless, disloyal, destructive and dishonest, are they arbitrary in dismissing them? Indeed, would not their retention of the petitioners be grossly arbitrary and childishly capricious?"

Recently, the Association of American Universities issued a far-reaching statement on the rights and responsibilities of American universities and of their faculties in this critical period. Reflecting the point of view of a number of outstanding college and university presidents, the association declared:

"Appointment to a university position and retention after appointment require not only professional compe-

tence but involve the affirmative obligation of being diligent and loyal in citizenship. Above all, a scholar must have integrity and independence. This renders impossible adherence to such a regime as that of Russia and its satellites. No person who accepts or advocates such principles and methods has any place in a university. Since present membership in the Communist party requires the acceptance of these principles and methods, such membership extinguishes the right of a university position."

The American Association of University Professors has issued this statement:

"If, in the investigation of members of faculties of institutions of higher education by a committee of the Congress of the United States or other legislative bodies, a faculty member invokes the Fifth Amendment of the Constitution of the United States as the reason for not replying to questions of the committee concerning his views and affiliations, and the committee accepts this reason as valid constitutional reasons for not replying, this, the thirty-ninth annual meeting of the American Association of University Professors concurs in the judgment of the council of the association, that invoking the Fifth Amendment in these circumstances is not, in and of itself, justifiable cause for the dismissal of the faculty member. However, since a decision to invoke the Fifth Amendment involves complex legal and ethical considerations, this statement is not to be construed as advising or generally approving such action by teachers under investigation."

EINSTEIN QUOTED

In April of 1953, William Franen-glass, a New York public school teacher, refused to testify before a Senate internal security subcommittee as to his political affiliations. Faced with discharge under the provisions of Section 903 of the New York City charter, he wrote to Dr. Albert Einstein for advice. Dr. Einstein's letter in reply was quoted by the United Press in June of 1953. Refusal to testify, Dr. Einstein declared, "must be based on the assumption that it is shameful for a blameless citizen to submit to such an inquisition and that this inquisition violates the spirit of the Constitution."

"Every intellectual who is called before one of the committees ought to refuse to testify, i.e. he must be pre-

¹⁰Daniman v. Board of Education of the City of New York, 118 N.Y.S. 3d. 487. Shlakman v. Board of Higher Education of the City of New York, 122 N.Y.S. 2d. 286.

pared for jail and economic ruin, in short, for the sacrifice of his personal welfare in the interest of the cultural welfare of his country.

"If enough people are ready to take this grave step they will be successful. If not, then the intellectuals of this country deserve nothing better than the slavery which is intended for them."

In July of 1953, the *New York Times* published a letter from the British philosopher, Bertrand Russell, defending college instructors who refuse to answer the questions of congressional committees, comparing their stand on this question to George Washington's disobedience of law and to the Christian martyrs' refusal to sacrifice to the emperor. This was apparently too much even for the Socialist leader, Norman Thomas. He requested the *New York Times* to publish his reply to Bertrand Russell:

"Of course there is no absolute ethical command, 'Thou shalt always obey every law.' But there is a strong presumption in favor of obeying law. Strongly opposed as I am to McCarthyism, I am compelled to support the legitimacy of congressional committees.

"Would not Bertrand Russell agree that honest speech is a far better defense of civil liberty than silence plus a pleading of the Fifth Amendment? The parallel to George Washington or the Christian martyrs is imaginary."

Rather than wait for the danger to strike and find them unprepared, the committee on academic freedom of the northern section of the academic senate of the University of California issued a statement to its members under date of March 25, 1953, that deserves quotation at some length:

"The committee on academic freedom believes that it is desirable to inform and advise members of the faculty regarding situations that might develop in case they are called upon to testify before legally constituted investigating committees. The committee . . . believes that if there is a clear understanding as to what reasonably might be expected from the faculty, the administration and the board of regents, this university can avoid difficulties that have beset other universities.

"Members of the faculty called to testify on matters arising from their assigned university duties and their university obligations should have the privilege of requesting legal advice

from the university. . . . An informal committee of law professors under the chairmanship of Prof. Richard W. Jennings will be available to all members of the faculty for information and advice on individual problems but, in case of testimony arising from activities unrelated to the university, members of the faculty should seek their own legal advice.

"The committee on academic freedom believes that a member of the faculty of the University of California is under an obligation to testify in a cooperative manner in inquiries law-



fully conducted by legally constituted state and federal investigating committees. Indeed, because of certain state laws which are applicable to all persons receiving compensation from the state of California, refusal to testify could set in motion a series of events which could result in dismissal from the faculty."

Some of the best advice to college and university people on this subject is to be found in a statement prepared by Profs. Zechariah Chaffee Jr. and Arthur E. Sutherland of the Harvard School of Law under date of Jan. 7, 1953, which reads, in part, as follows:

"The underlying principle to remember in considering the subject is the duty of the citizen to cooperate in government. He has no option to say, 'I do not approve of this grand jury or that congressional committee; I dislike its members and objectives, therefore I will not tell it what I know.' He is neither wise nor legally justified in attempting political protest by standing silent when obligated to speak. The citizen is ordinarily required, when summoned, to give testimony to a court, legislative committee or other body vested with subpoena power, and if he refuses to do so he is punishable. Subpoena power has proved necessary to the conduct of government; it is the correlative of the guarantee to an accused in the Sixth Amendment that he shall

'have compulsory process for obtaining witnesses in his favor.'

"To this general duty of the citizens, the privilege against self-incrimination is an extraordinary exception. . . . Criticized adversely by some because it makes police work difficult, this immunity is justified by others because it keeps government officers active in investigating the facts of offense, rather than relying upon 'grilling' the suspects. In a discriminating examination of the arguments for and against the constitutional right, John J. Wigmore, the distinguished legal writer, concludes: 'For the sake, then, not of the guilty, but of the innocent accused, and of conservative and healthy principles of judicial conduct, the privilege should be preserved.'

"There are several current misconceptions about the testimonial privilege to remain silent. The witness is not the ultimate judge of the tendency of an answer to incriminate him. He can be required, under pain of contempt, to disclose enough to show a real possibility that an answer to the question will tend, rightly or wrongly, to convict him of a crime.

"Mere embarrassment is not an excuse. The witness must be subjecting himself to some degree of danger of conviction of a criminal offense.

"A privileged refusal to testify is not an admission of guilt for the purpose of criminal prosecution. Its effect on popular opinion is, of course, not within constitutional control. A refusal may mean only that the witness has innocently got into a situation where he is apparently, though not actually, guilty of a crime; but fairly or not, the fact that he feels that it is necessary to refuse information to a government agency on the grounds that it will tend to incriminate him inevitably casts a shadow on his reputation.

"He should remember that the privilege against self-incrimination is a complex and technical subject. If, feeling that he may be called upon as a witness, he attempts to decide for himself the legality or the wisdom of asserting a privilege to remain silent, he is as ill-advised as the layman in serious pain who doses himself with home remedies. Any prospective witness who is doubtful about the desirability of answering questions should feel that it is essential for him to obtain the professional advice of a lawyer, to whom he makes prompt, full disclosure of the facts."

A specific approach to

CUSTODIAL TRAINING

J. P. LEVERONE

Custodial Superintendent, University of Minnesota

CUSTODIAL TRAINING AND ALL OF ITS related phases has been, and still is, a cumulative program at the University of Minnesota. Approximately two and one-half years of sustained effort has gone into it and we are still processing some of its components.

Our program has been a cooperative one; no one phase can stand alone but collectively the project becomes well rounded and sound. The complete cooperation between the training division of the office of personnel and the custodial division of physical plant has been the yardstick for what measure of success we have attained.

The broad heading "Custodial Training" divides itself into two subheadings, the first being the more or less operational phases of the problem and the other being the formalized training itself. The treatment given to these headings here is necessarily brief, but I hope to cover the highlights.

From the standpoint of operations five major work standards seem to be generally recognized by the sanitation industry. These are: (1) work output; (2) work supervision; (3) work interest; (4) work supplies; (5) work quality.

Work Output: In this standard we want the answers to the questions: How much work is there in the building? How many men do we need? How much is a fair day's work?

The first step toward achieving these answers made itself readily evident. We faced the problem of gathering a large mass of informative data quickly and as inexpensively as possible. We had to know the nature of many items in a building. How many square feet of asphalt tile? How many and what size windows? How many

desks, cabinets, wastebaskets? In other words, we looked for accurate gathering of basic data.

This need led to the design of a set of questionnaires. The questionnaires are adapted to tabulating machine methods and provide the answers quickly and in many combinations. There are four in the set, all color-coded. The white set compiles those items in a building that are permanent in nature; the yellow sets down items that are movable; pink gives basic data covering toilet rooms, and green tells about stairways and outside entrances.

Completion of this survey led di-

rectly into answering the question, What do we do with the information? The result is shown in Exhibit A, a sample page from one of our permanent building schedules. Forty-three specific cleaning operations are covered in this schedule and there is one for every building at the university, where custodial service is provided.

Column 1, labeled Operation, is simple and direct; it lists each of the 43 cleaning operations.

Column 2 is headed Time Factors. Time studies had been made by other people and we used what we considered the best of these in conjunc-

EXHIBIT A — FOLWELL HALL

OPERATION	TIME FACTORS (in min. by units)	TOTAL NO. OF UNITS	MINUTES PER JOB	REPETITION FACTOR	MINUTES PER YEAR
1. Sweeping floors					
a. Classrooms.....	14 per 1000 sq. ft.	39.4	552	220	121440
b. Office and rest-rooms.....	14 per 1000 sq. ft.	16.4	230	220	50600
c. Corridors and gymnasiums.....	7 per 1000 sq. ft.	16.7	117	660	77220
d. Storerooms.....	14 per 1000 sq. ft.	0.7	10	52	520
e. Toilets, restricted..	14 per 1000 sq. ft.				
f. Toilets, community..	14 per 1000 sq. ft.	2.3	32	220	7040
g. Stairways and landings.....	10 per 48 steps				
h. Shops and laboratories.....	14 per 1000 sq. ft.	0.9	13	220	2860
i. Janitors—sinks and fan rooms.....	14 per 1000 sq. ft.	3.8	53	220	11660
2. Floor maintenance.....	150 per 1000 sq. ft.	58.0	8700	1	8700
3. Mopping floors.....	54 per 1000 sq. ft.	60.9	3288.6	2	6577
4. Waxing floors.....	15 per 1000 sq. ft.	60.9	914	2	1828
5. Cleaning windows					
a. Special and double-hung.....	3 per 30 sq. ft.	291.6	875	3	2625
b. French.....	8 per 30 sq. ft.				
6. Cleaning door and transom glass...	3 per 30 sq. ft.	159.4	478	3	1434
7. Cleaning partition glass	3 per 30 sq. ft.	8.4	25	3	75
8. Cleaning picture glass	3 per 30 sq. ft.	13.2	40	3	120
9. Dusting lockers.....	5 per 100 lockers	3.9	20	52	1040

From an address presented at the annual meeting of the Association of Physical Plant Administrators, Auburn, Ala., 1953.

tion with those of our own making so that the end result has been a set of averaged time standards that have proved themselves quite reasonable.

Column 3 tells how many of the units, as defined by Column 2, we have in any given building.

Column 4, Minutes per Job, is the result of multiplying the time in Column 2 by the number of units in Column 3. For example, the first line of Exhibit A shows that there are 39.4 classroom floor units that, if swept just once, would require 552 minutes.

Column 5, Repetition Factor, is perhaps the most important figure in the schedule. Too high a factor is too costly; too low gives inadequate cleaning. The figure 220 shows that the operation is done once daily for the school year only. A factor of 250 would require daily performance for a full calendar year, arrived at by subtracting, from 365 days, 52 week ends and 11 paid holidays.

Column 6 is the result of multiplying Column 4 by Column 5. This represents the total time spent on the operation in the building for one year.

The grand total found by adding the figures in Column 6 for all of the operations gives the total number of minutes necessary to maintain the entire building for the yearly interval.

We also get from this schedule the manpower requirements for the building. Our custodians are scheduled on the basis of a seven-hour day. The remaining hour represents 12½ per cent allowed for lag—the time spent in getting water, gathering tools and equipment, loafing.

Accordingly, seven hours a day times 60 minutes equals 420 minutes. This multiplied by 250 days equals 105,000 minutes, or one unit of manpower.

The total found by adding all of Column 6 is divided by 105,000 minutes, and the result is the manpower needed to maintain the building. In the case of Folwell Hall, the building named in the exhibit, the figure is 5.92, which we interpret as six men.

FINAL STEP

The final step under this first work standard was the establishing of individual work schedules. These are cut-outs of floor plans 22 by 28 inches in size, mounted on white matting and framed under glass. The plans are coded by color with each color representing a position assignment; also under glass is a supporting maintenance schedule 15 by 20 inches also

EXHIBIT B — CUSTODIAL MAINTENANCE SCHEDULE

	THREE TIMES DAILY	TWICE A YEAR	ONCE A YEAR
	WASH all windows, window guards, partition glass, door and transom glass, picture glass, showcase glass, corkboard glass, fire extinguisher glass, light fixtures and CLEAN all radiators and toilet partitions	Map and wax all floors	Complete maintenance of floors Clean all corkboard Clean refuse cans Clean all lockers Wash and polish all furniture
TYPE OF ROOM	DAILY OPERATIONS	WEEKLY OPERATIONS	
OFFICES	Sweep floors Empty wastebaskets Clean chalkboards Dust furniture and woodwork	Empty pencil sharpeners Clean chalkboard erasers Clean chalk trays	
CLASSROOMS	Sweep floors Empty wastebaskets Clean chalkboards	Empty pencil sharpeners Clean chalk trays Clean chalkboard erasers	
CORRIDORS	Sweep floors Clean drinking fountains Empty refuse cans	Dust lockers	
TOILET ROOMS	Sweep floors Mop floors Clean washbowls Clean urinals Clean mirrors Empty waste containers		
STAIRWAYS	Sweep treads and landings Dust banisters	Mop treads and landings	
STOREROOMS		Sweep floors	
SHOPS	Sweep floors Empty waste containers		
LABORATORIES	Sweep floors Empty waste containers Clean chalkboards	Dust furniture and woodwork Clean chalk trays Clean chalkboard erasers	

on white mat stock and a reasonable facsimile is shown in Exhibit B.

Work Supervision: The building of an effective supervisory force and then using it productively.

The problem here was that of a rapidly expanded university having at the custodial helm two men responsible for a large number of buildings on a very sizable campus, a situation almost impossible to cope with. The solution—an expanded staff at all levels, but perhaps the biggest single contribution was the appointing of eight senior building caretakers better known as working foremen.

The campus was divided into eight building groups with each cluster having in it at least five major buildings. Each group is immediately entrusted to a working foreman who spends half his time on a custodial work assignment and the other half in supervision. In his supervisory time the foreman is charged with many duties but perhaps the most important of these is that of

follow-up on new men who come out of the training sessions and are charged to him. Other duties are supervision of timekeeping stations for the group and control of our system for handling supplies.

Work Interest: The hidden quality, inherent in many men, which greatly affects the type and quality of a job performance.

Our approach here was fairly specific and was calculated to raise the standard of dignity. The men were sounded out on uniforms, and they voted the adoption of a gray uniform of good quality, purchased by themselves under a wholesale plan. About 60 per cent of the force is now in uniform and the remainder will be when present clothing gives out.

All of our men were invited to comment freely on our surveys. This they did, with the result that our program has thus far been completely accepted.

One other item that helped raise interest and morale was the filling of

EXHIBIT C — SWEEPING

1. Floor not swept. No evidence of any effort.
Entire floor area is
 - (a) littered
 - (b) sandy
 - (c) extremely dusty
2. Floor is swept but only in readily accessible areas. Corners and areas under and around furniture are:
 - (a) sandy
 - (b) extremely dusty, have lint build-ups, or other foreign matter
3. Floor is acceptable; accessible areas, corners, and areas around and under furniture are free from litter, sand or heavy dust.
- 3E. Floor fulfills requirements of standard No. 3 but also shows extra effort with regard to appearance. Area shows results of recent waxing and buffing or efficient removal of dull caked-on dirt. Floor is close to original appearance at installation.

all new supervisory positions from the current working force. This helped greatly to dispel the notion, entertained by many custodians, that we were in effect "a closed corporation."

Work Supplies: The use of effective tools and supplies results in a higher degree of cleanliness at a lower cost per square foot; in addition, good equipment helps to increase interest, quality and output.

With this in mind the following items are a few of the measures now installed in our program:

1. An effective buffing program with prescribed methods for various floor surfaces along with good quality machines.

2. Principles of detergency, a detergent compounded locally being used for wet mopping operations. It has been quite successful in speedily lifting all types of dirt.

3. Well defined methods for sealing various types of floors.

4. Careful purchasing of regular run tools and equipment so that quality stays high and complaints are few.

The standard of work supplies cannot be overlooked if the program is to be well rounded.

Work Quality: Simply defined, this standard means "inspection."

The commonest fault of many inspection systems is the use of such words as "above average," "average" and "below average," which in themselves are meaningless. Left on such an arbitrary basis no two inspectors agree on their findings.

Our inspection system is being formed now and Exhibit C is submitted to show only our approach; it is not an inspection form. We have ruled forms covering our operations by room category and we also allow for difficulties in rating because of type of occupancy.

The master sheets covering the operation are the real basis for our system. In them we try to pinpoint various degrees of cleanliness by describing as concisely as possible what is likely to be found. Extremely important, however, is the fact that we try to make our ratings attainable. To operate on a scale requiring perfection only results in low ratings and low morale. It should be noted from our sample descriptions that many rating combinations are possible and that recognition is given for extra effort. Formal inspection of this type is conducted at the level of senior custodial supervisor, and a special form tells the group foreman quickly where his buildings are not up to standard.

FIVE STEPS IN TRAINING

Five important steps in the development of the actual training program were designed by the training division.

The first step was that of developing standard custodial work methods before any training plans could be laid. We gathered information from industry and other school systems. We broke down a specific set of custodial operations into their respective working steps and these were made up into an original group of operation sheets.

These sheets were then turned over to 12 of our most experienced custodians, who were asked to tear them apart in a series of conference sessions. This they did in no uncertain terms and the final results were a far cry from the originals. The new sheets, however, were really workable and formed the basis for further developments.

The second step was to acquaint all experienced custodians on the pay roll with our program and further to improve our standard work methods through training discussions with them.

The men were taken, in the order of our eight building groups, through a series of guided discussion sessions so that (1) they could become acquainted with what had been done; (2) we could get their ideas, and (3) we could get them to adopt as many of the standard work methods as possible. The groups averaged 15 men and the project was successful to a surprisingly high degree.

The third step involved the development of training guides and training aids. Here again, the training division supplied the invaluable aid so necessary in the entire project. A training guide in volume form was made up for the entrance training of new janitors. It is, in essence, a 20 hour skills training program to be conducted by two senior custodial supervisors and is written to lay out the training program step by step for the trainer.

Along with this guide the training division provided many excellent training aids. We have aids in the form of continuous movie loops so designed that they can be shown over and over again with complete continuity. It is this repetitive impact that is so valuable in getting the lessons across. Aiding and abetting these loops we have slides, flipover charts, and a standard work methods manual.

The fourth step was the training of senior custodial supervisors in how to train new custodians. This step refers back to the 20 hour skills training course. Two senior supervisors were given about 10 weeks of instruction in how to train. This was done at the rate of two hours a day, three times a week. The steps in training were analyzed along with brief sessions on how to analyze work for training purposes. Other important sections of this course were (1) how to use the training guide, (2) several methods of working with a group, (3) how to do a four-step demonstration, and (4) how to use audio-visual and other training aids.

Nine working foremen were trained in on-the-job training technic. This course was spread over 21½ hours. Its purpose was to prepare these group leaders to follow up on the classroom training right on the job.

The fifth step was the training program for new custodians. This training is done by a senior custodial supervisor. It is a 20 hour course given half in the classroom and half on the job. Full use is made of all of the training aids and the manual.

Organization, Inspection and Buying for Multiple Unit Operation

R. E. OHLZEN

Department of Purchases, Chicago Board of Education

THE PRIMARY FUNCTION OF THE purchasing department of any school system is to provide the materials required for (1) instructional purposes and (2) affiliated service departments.

The 1951 operating figures for the Chicago bureau of lunchrooms showed a loss of \$100,000. An analysis of the operating costs proved the greater part of this figure to be hidden costs, such as the premium prices paid for perishable foodstuffs, which necessitated daily deliveries direct to each of the 184 school lunchrooms. The bidding at that time was so organized that awards were made for fresh meats and similar foods to the firms submitting the lowest aggregate total bid. Separate quotations were received on each of the city's 15 school districts, each district containing approximately 12 school cafeterias. The bids were based on estimated requirements, and in many instances were not accurate consumption figures.

A detailed analysis of past purchases showed that the premium prices paid were the results of from six to 10 dealers making daily food deliveries. Little or no effort had been made to consolidate the buying program.

A meeting with representatives of the various branches of the food industry confirmed our diagnosis that our specifications and demands were such that only a few highly specialized firms in each section of the food industry were able to meet the requirements.

In an attempt to ensure the delivery of quality merchandise, the bureau of lunchrooms had a receiving inspector who traveled from school to school verifying the quality of foods received. It was next to impossible for one inspector to cover an area as extensive as Chicago with its 184 school cafeterias. Centralized receiv-

ing and redistribution from a commissary was found to be impractical and expensive in this labor market.

Revamping of the specifications was the first step in our reorganization program. Specifications for fresh fruits and vegetables, meats, frozen foods, fish and canned foods were revised through use of U.S. Department of Agriculture grades, thus making them clear and concise to any bidder.

Fresh fruits and vegetables were the first commodities considered. It was found that 125, or almost all, of the elementary school cafeterias made purchases amounting to less than \$25 a week. To supply the needs of this group, arrangements were made with neighborhood green grocers. The requirements of the 60 remaining schools, almost entirely high schools, were bid competitively on a cost-plus basis. This specified that all fruits and vegetables be U.S. Department of Agriculture No. 1 grades. Inspections were to be made at the supplier's plant by Department of Agriculture personnel prior to delivery to any school. Invoices, as well as each package or container, were required to be stamped or sealed by the federal grader when the merchandise satisfactorily passed inspection for the grade specified.

Under the cost-plus system, dealers were requested to quote a percentage figure over their actual purchase cost. This percentage was to include all other costs, such as delivery, pickup, broken packages, and taxes. No separate charges were allowable. Their cost-plus or percentage was to be added to the total order. In other words, the individual school invoices were to be priced at the dealer's actual cost and his cost-plus, or percentage, converted into dollars and added to the total of the invoice as one figure. In no instance was the dealer's cost



Above: Neighborhood grocers supply fresh fruits and vegetables to the elementary schools. Below: Prepackaged fresh frozen and preportioned meats are used in the high schools.



price to exceed the maximum figure published in the "United States Department of Agriculture Production and Marketing Administration, Fruit and Vegetable Branch, Daily Fruit and Vegetable Report of the Chicago Market" for the week the merchandise was delivered.

The board of education was granted the privilege of auditing the dealers' books and verifying the cost prices as invoiced. The requirement was that invoices rendered must clearly describe the item, size and grade. At the end of six months' operation, the cost of inspection was found to be less than 5 per cent of the total purchase price, and the reduction in the over-all cost of fruits and vegetables proved to be well in excess of 5 per cent.

While this phase of food buying was being reorganized, the problem of daily fresh meat deliveries was under consideration. We obtained the assistance of the grading service of the Department of Agriculture in preparing detailed specifications on fresh frozen meats. Standard packaging suitable for the needs of all our cafeterias was developed.

CONVERT TO FROZEN MEATS

In the process of making the change-over from fresh to frozen meat, it was found that when fresh meats were purchased approximately a hundred different cuts were being ordered each month. With the standardization program of fresh frozen meats, 30 cuts supplied our complete requirements. Following 90 days of experiment and market research, on May 1, 1952, we converted the meat requirements to prepackaged fresh frozen and, whenever possible, preportioned meats.

To begin the fresh frozen meat experiment, bids were requested for approximately two months' requirements, deliveries of the entire quantities to be made to a commercial cold storage plant. The 184 cafeterias were divided into geographical districts. Two districts were serviced each day; meats were picked up at the cold storage plant by 8 a.m., and deliveries were completed by 3 p.m. A school now receives one delivery a week, which comprises its week's requirements. The Department of Agriculture's grading and inspection service has been made mandatory on all orders packed for our use. The cost of this continuous inspection from the time the cut is dismembered from the carcass to the time it is sealed in its

container (not to be reopened until delivered to the school lunchroom) is less than three-quarters cent per pound.

The annual purchase of 800,000 pounds of frozen meats—after all the costs of storage and delivery to individual schools had been deducted—resulted in a saving in excess of \$75,000. Aggregate total quantities for approximately 60 days' requirements could be bid competitively on an individual award basis to most of the packers and wholesalers in the Chicago area.

The third time bids were requested, quotations were received from plants



as far away as Texas, Minnesota, Pennsylvania and Georgia. Buying out of town presented no problem as the Department of Agriculture made available detailed copies of our specifications to grading offices in those areas. Grade, trim, fabrication and packaging were identical, regardless of the origin of the merchandise.

The advantage of a year's buying practice with fresh frozen meat led us to expand this type of purchasing and distribution. When our school lunchrooms reopened last September, their requirements of frozen fruits, vegetables and sea food were purchased under a similar plan. Distribution is from a central cold storage plant and delivery is made to the school lunchrooms along with the frozen meat. Reorganization of these groups left only canned and staple foods to be considered.

At present, the canned foods are specified by federal grade, variety and count, or by size, that have been found most suitable for our use. After competitive bids have been received, samples are requested, and a test panel is assembled for the purpose of making blind selection based on quality. All labels are covered or removed so that identification of any supplier's product is impossible. Drained weight or piece count is marked on each can. A first, second and third choice is made based on quality. Price is then

discussed to evaluate what is the most economical offer for our use. The test panel still has no knowledge of brands.

After selections have been made, a sample can of each item is sent to the process food division of the Department of Agriculture for an analysis and official grading. This is done to assure that our specifications show the grade or quality of merchandise we are actually selecting.

It was found on a few occasions that where we had been specifying Grade "A" we were selecting Grade "B" as a suitable quality. Also, the reverse has occurred: our specifications calling for Grade "B" while, in the actual selection, one or two Grade "A's" offered were found to be so superior that they were selected.

This official grading also gives us an unbiased guide by which to check incoming shipments at our division of supplies. For Department of Agriculture grades are based on a point scoring system and, when an item scores 87 points on its first test, the merchandise delivered when re-inspected should score on the same basis and approximately the same points.

ORDERING METHODS REVAMPED

Following this reorganization of buying, methods of ordering by the school lunchrooms were revamped. One week prior to delivery date, market lists are submitted to the department of purchases. They comprise:

Exhibit A—Food Delivery Order (for ordering fresh meats, frozen fruits, vegetables and sea food)

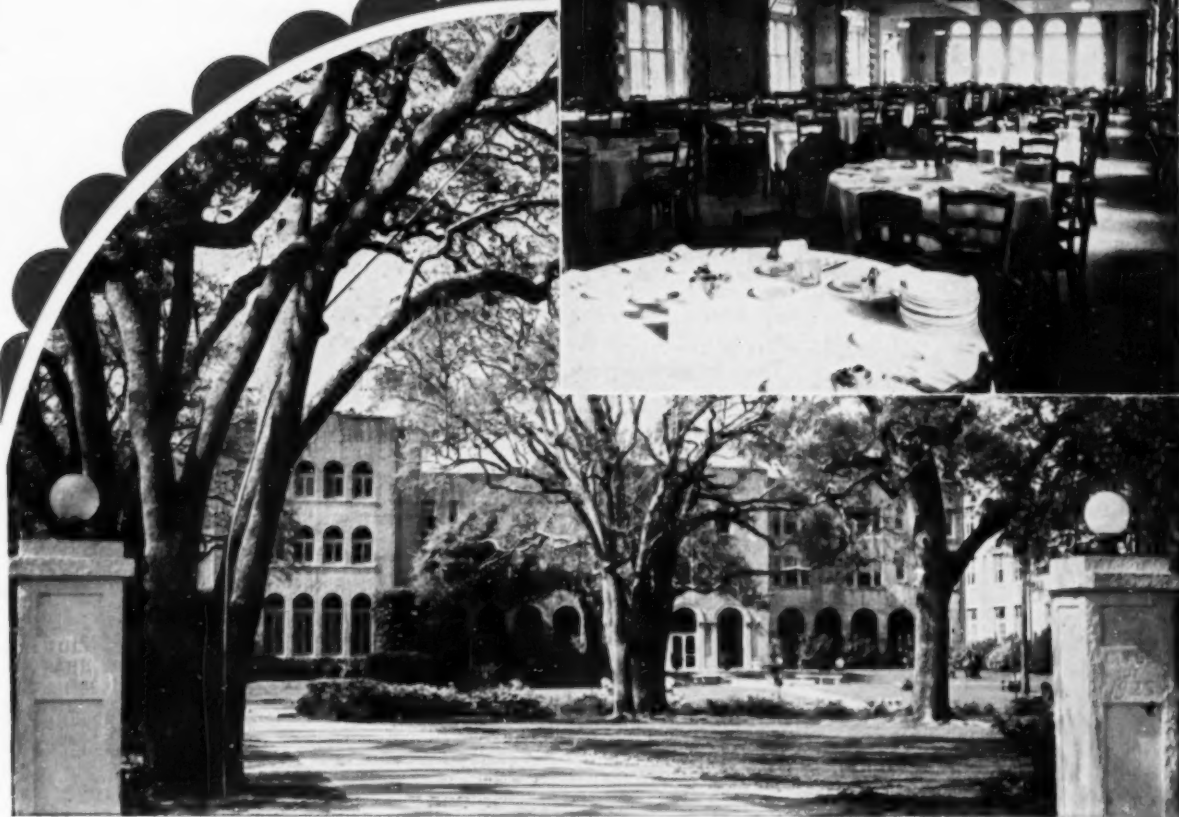
Exhibit B—Smoked Meats

Exhibit C—Staple Groceries

The first year's operation with the reorganized buying program gave the following significant results:

1. Annual costs were reduced by more than \$100,000.
2. Quality was controlled by continuous U.S.D.A. inspection.
3. Portion control was obtained by the use of prefabricated meats.
4. Availability of 60 days' supply at all times was assured, thus eliminating the possibility of any shortage.
5. There was faster service to the using department of controlled quality foods at greatly reduced costs.
6. There were improved relations between the purchasing department and the board's suppliers. The results of clear, adequate specifications and inspection at the source of supply kept "returns" at a minimum.

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NEWS

**Urges Reorganization of Educational Programs . . . N.E.A. Summarizes
President's Budget . . . Consider Students' Health Habits . . . Report
Shows Trends in College Salaries . . . U.S.O.E. Reports on P.L. 550**

Urges Tuition in Keeping With Varied Courses

NEW YORK. — The annual report of Dr. Edwin S. Burdell, president of the Cooper Union for the Advancement of Science and Art, observes that "private higher education should place proper price tags on its offerings. Private education carries the same price tag for all and it is a below-cost price tag at that," he contended. "The well-to-do student is never billed for the actual cost of his education; the poorer student is given a further discount through the device of the scholarship."

Commenting on the need for reorganization of educational programs, Dr. Burdell continued: "Outside the traditional profession, a two-year terminal program would seem to be more in keeping with the aspirations of the student as well as with the resources of his family and the community."

Then he continued: "Because of the nonspecialized nature of the general curriculum of two-year colleges, the teaching cost per student is low and there is little need for specialized buildings and expensive equipment. Such institutions could be maintained without deficits or without large annual fund raising campaigns, and a realistic, full-cost tuition policy for the two, instead of four, years could be met by most students and their families. Their location in or near centers of population would eliminate the resident student, further reducing the cost of attending college."

As an illustration of the below-cost price tag, Dr. Burdell recalled that one leading eastern university reported that a \$600 tuition would pay 72 per cent of the cost of a year's study in law but only 18 per cent of a year's study in public administration. It also was shown that an \$800 tuition paid for nearly half a year's education in

business but that it paid for only one-eighth of a year's study in dentistry.

Two Washington, D.C., Universities to Merge

WASHINGTON, D.C. — Announcement was made last month that the Catholic University of America and Columbus University, both of this city, would be merged.

Bishop Bryan J. McEntegart, rector of Catholic University, and William E. Leahy, president of Columbus University, said the property of Columbus will be transferred to Catholic University.

Involved primarily are the law schools of the two universities. The combined law school will operate the present Columbus facilities. The shift will be effective at the start of the fall term.

Education in the 1955 Federal Budget

WASHINGTON, D.C. — Recommendations of the budget submitted by President Eisenhower relative to matters of education were recently summarized by the legislation and federal relations division of the National Education Association. The amount provided for education and general research, exclusive of veterans' education and research sponsored by defense agencies, is \$223 million for the 1955 budget. The budget for the fiscal year of 1954 includes \$278 million for educational and general research.

According to the N.E.A. bulletin, President Eisenhower's budget provides for an increase of 7 per cent for salaries and expenses of the U.S. Office of Education; \$3.1 million for 1955 as against \$2.9 million for the current year. Those areas in which the increases are specifically applied are: consultative services with regard to the education of children of migratory workers; improved statistical services, and an improved publications program. The only division to receive a cut was vocational education, for which salaries and expenses are to be reduced from \$486,000 to \$426,000.

Funds proposed for land-grant colleges were to be continued and no reduction was proposed in funds appropriated under the Bankhead-Jones Act of 1935.

Those subjects of primary interest to higher education include an allocation in the 1955 budget estimates of \$458.5 million to pay educational and training allowances for approximately 400,000 veterans enrolled under Public Law 550.

The Veterans Administration predicts that 168,000 P.L. 550 veterans will be enrolled in higher institutions during fiscal 1955 (roughly the academic year 1954-55).
(Continued on Page 56)

FOOD SERVICE INSTITUTE

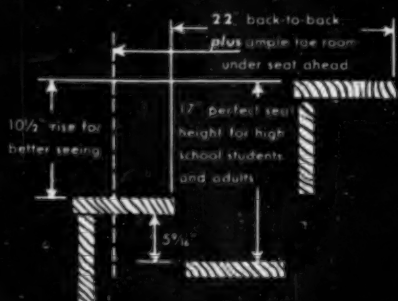
In response to popular and insistent demand, the fourth Food Service Institute to be presented by College and University Business will be held July 12 to 14 at the Knickerbocker Hotel, Chicago. Northwestern University and the University of Chicago will aid this magazine in the sponsorship of the 1954 institute.

In 1948, 1949 and 1951, capacity enrollment of 125 delegates made it impossible to permit multiple registration by any single institution. A maximum of two delegates per institution has been established.

Outstanding leaders in food service administration will be members of the faculty for this year's institute. Program details will be announced in forthcoming issues of this publication.

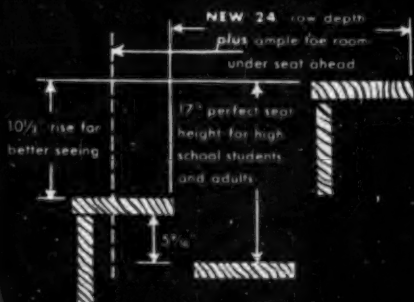
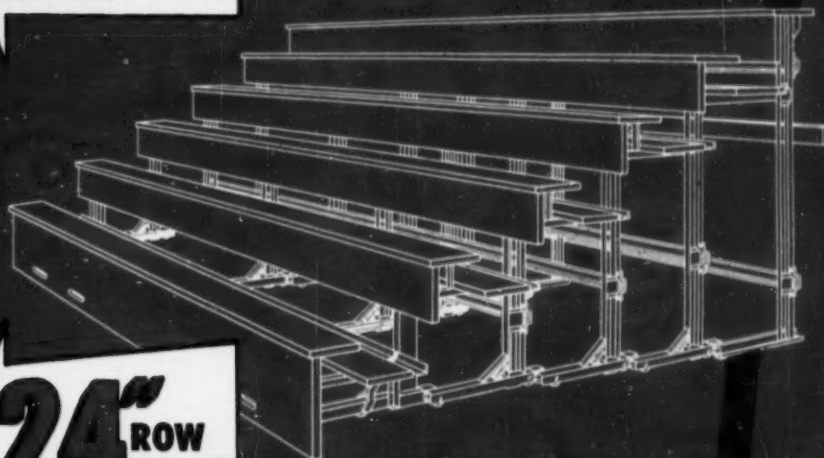
Tuition fee for the three-day institute will be \$17.50. Checks should be made payable to "Food Service Institute" and sent to College and University Business, 919 North Michigan Avenue, Chicago 11.

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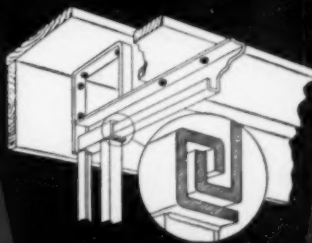
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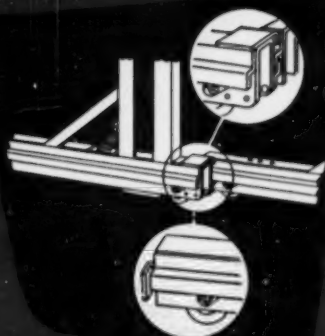
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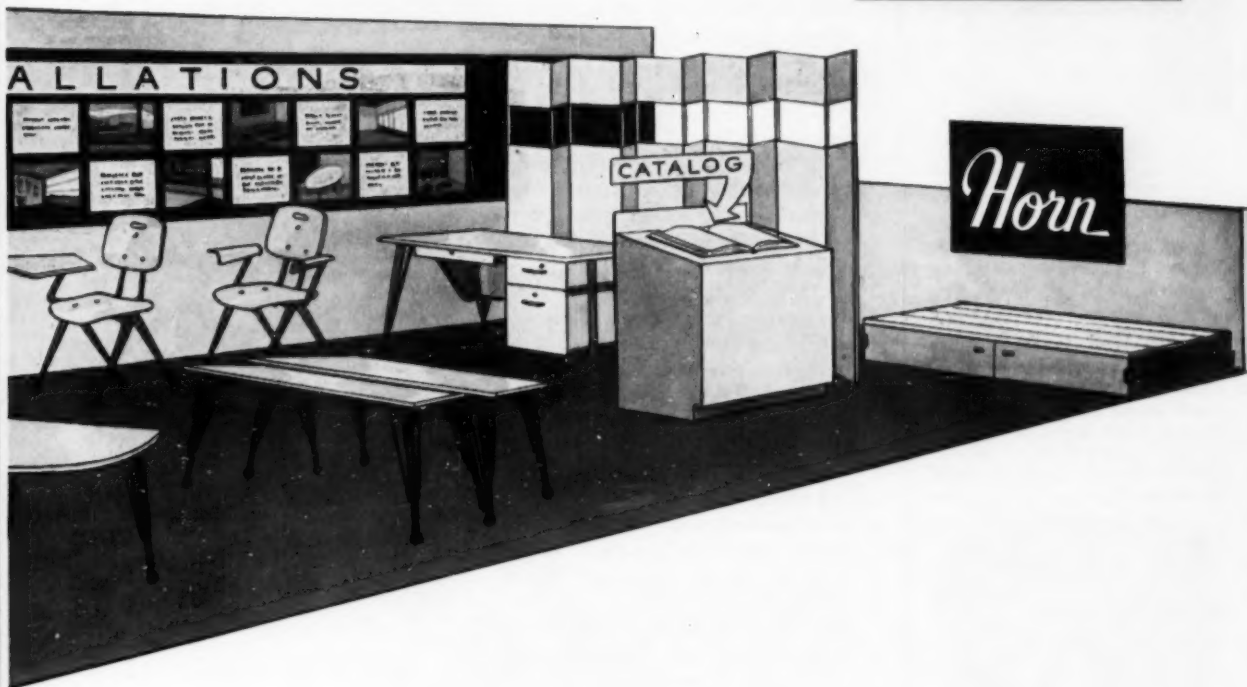


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NEWS

demic year 1954-55). The amounts proposed for subsistence and tuition payments for P.L. 346 veterans reflect the reductions in enrollments under that program, 117,000 enrolled for 1955 as against 240,000 presently enrolled. The figures for P.L. 346 veterans in higher institutions are 32,000 for 1955 as against 70,000 for 1954. The budget proposes no change in language limiting payments to institutions for record keeping to \$1 per veteran per month as against \$1.50 per month authorized under P.L. 550.

The present college housing program has been limited administratively to \$100 million for applications received up to the close of fiscal 1953 (June 30, 1953) and a cumulative \$150 million by the end of the current year. The Administration is expected to release \$25 million during 1955, bringing the cumulative authority of the Housing and Home Finance Agency to make college housing loans up to \$175 million out of the \$300 million authorized by the Housing Act of 1950. Within the available funds, it is expected that 90 loan applications will be approved by the end of the current fiscal year and 52 more during 1955. H.H.F.A. estimates that as many as 400 applications will be filed during 1954-55.

The 1955 budget requests \$15 million for the educational exchange program operated under the Smith-Mundt Act of 1948. This is a slight increase over the amount authorized for the current fiscal year. There will be a slight reduction in funds available for exchanges with Near Eastern and African countries in order to provide more money for exchanges in the Far East.

The federal government will spend just over \$2 billion on research and development in 1955. Defense related projects will account for most of this expenditure. The National Science Foundation will be encouraged to channel more federal money into basic research through grants to educational institutions and to individuals. The increase recommended is from \$8 million to \$14 million, the additional \$6 million to be used for institutional grants. A part of the increase represents a transfer to N.S.F. from the Department of Defense of some basic research programs. Last year's budget recommendation of \$12 million for N.S.F. was originally cut to \$6 million in the House, later raised to \$8 million.

Pennsylvania Begins Reorganization Program

PHILADELPHIA.—Robert T. McCracken, chairman of trustees, recently announced an administrative reorganization of the University of Pennsylvania as a result of a year-long survey by a subcommittee headed by Dr. Alfred H. Williams, president of the Federal Reserve Bank of Philadelphia.

In the reorganization program, according to Mr. McCracken, the changes will clarify lines of communication and responsibility, free the president of a mass of administrative detail while strengthening his authority, and institute advance methods of short-range and long-range budget planning and expenditure control.

Although the survey dealt with procedures rather than with personnel, the reorganization will bring about a change in responsibilities for several persons. William H. DuBarry, executive vice president since 1944, has been elevated to the new post of "vice president for the corporation," in which capacity he will coordinate the increased participation of the trustees in the formation of university policy. As the full-time campus representative of the trustees, he will deal with matters of broad policy rather than with administrative detail.

Donald K. Angell, vice president and secretary of the university, temporarily will assume the additional responsibilities of vice president for development, including fund activities, public and press relations, and placement.

John L. Moore, controller, will have the broader responsibilities of acting business manager of the university in charge of personnel, plant and campus services, pending a later consolidation of all fiscal and service functions under a vice president for administration.

Wants Name Changed

EAST LANSING, MICH.—The State Board of Agriculture, governing body of Michigan State College, recently voted to ask the legislature and the governor to enact legislation to change the name of the college from Michigan State College of Agriculture and Applied Science to Michigan State University. The action was taken in anticipation of Michigan State College's celebration of its 100th anniversary in 1955.

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NEWS

Dartmouth to Keep Acreage Atop Mountain

CONCORD, N.H. — Dartmouth College officials recently announced that the institution intends to retain title to the summit of Mount Washington, the highest peak in the northeastern United States. A 60 acre tract atop the mountain was bequeathed to the college by Col. Henry N. Teague, its former owner, who died in 1951. The college announcement followed sug-

gestions by New Hampshire newspapers that the tract be donated to the state.

Robert S. Monahan, manager of Dartmouth College Outing Properties, stated that to dispose of the summit property would violate the "moral obligation" of the college to its benefactor, "who clearly intended ownership by the college of this parcel in his estate."

The college also inherited the Mount Washington Cog Railway, which car-

ries tourists to the summit, and the Mount Washington Base Station, including a clubhouse, weather station, and radio tower. All these properties, including the tract, are still under the administration of executors of the Teague estate.

Meet to Consider College Students' Health Habits

NEW YORK.—Results of a recent survey sent to 200 college and university presidents in regard to health problems of American college students indicated that emotional difficulties and poor health habits seem to be the major matters of concern. The survey was conducted in anticipation of the holding of the fourth National Conference on Health in Colleges to be held here May 5 through 8.

Forty national organizations interested in aspects of health and education are jointly sponsoring the conference. The program will include 16 working committees in which college and university presidents, deans, physicians, nurses, psychologists, specialists in physical education and health education, student counselors, and students will pool their knowledge and experience to develop comprehensive health programs integrated with all other college functions.

Need for Public Confidence Stressed by Dr. Compton

CINCINNATI. — Dr. Wilson M. Compton, president of the Council for Financial Aid to Education, Inc., in a speech presented before the annual meeting of the Association of American Colleges asserted that though higher education has a great need for financial support, "it has a greater need for public confidence. Financial support will follow public confidence; it will not precede it," Dr. Compton declared.

Commenting on this subject, however, he stated: "Some colleges evidently would rather rely on finding some way to 'bail out' the costs of what I have called 'inertia' than to look their own education programs—and their business management too—squarely in the eye."

At the convention, action was taken by the Association of American Colleges recommending amendment of Public Law 550 to make provision for

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NEWS

allocation of some of the fees direct to institutions rather than under the present arrangement in which the entire financial appropriation for educational benefits is paid to the veteran.

Chancellor R. H. Fitzgerald of the University of Pittsburgh was elected to the presidency to succeed Dr. John R. Cunningham, head of Davidson College. Joseph R. N. Maxwell of Boston College was named vice president, and J. Ollie Edmunds, president of Stetson University, treasurer. Theo-

dore Distler, president of Franklin & Marshall College, was elected executive director to succeed Dr. Guy E. Snively, who will retire in June.

Discrimination Declines on Application Blanks

NEW YORK.—According to a recent report by the Anti-Defamation League of B'nai B'rith, 450 colleges and universities out of 518 surveyed throughout the country have revised their

application blanks to eliminate direct or indirect questions that might be considered discriminatory.

The category of questions involved included place of birth, parents' place of birth, mother's maiden name, church organizations, language spoken at home, and change of name.

Henry Edward Schultz, national chairman of the Anti-Defamation League and a member of the New York Board of Higher Education, reported that more than 92 per cent of the colleges surveyed indicated they had at least one discriminatory question in their application blanks.

"We asked the colleges to take remedial action and most of them did," Mr. Schultz said.

Make National Survey of College Salaries

WASHINGTON, D.C. — The typical salary paid to college and university professors places them at the bottom of the professional totem pole as compared with physicians, dentists and lawyers, according to Frank W. Hubbard, director of the research division of the National Education Association, in releasing a national report of college and university salaries.

The study, the first of its kind to be undertaken by N.E.A., reports on the salaries and salary schedules in 417 colleges and universities, including state, nonpublic and municipal universities, and land-grant, state, teachers and private colleges. Trends in salaries brought out by the study show that:

The most attractive beginning salary for college instructors is likely to be found in teachers colleges, where the reported minimum is \$3538. This is not true with the rank of professor, where the median is \$5250. The lowest beginning salary of \$2743 is reported by small private colleges.

State universities offer more financial inducement to starting professors with median beginning salaries of \$5525. The median or typical top salaries paid to professors range from \$4860 in small private colleges to \$8950 in municipal universities. Among all institutions reporting, only one university indicated it could pay full professors as much as \$17,000 to \$18,000.

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NEWS.

on college and university campuses. Median salaries range from \$4000 in some small private colleges to \$9540 in land-grant colleges. Some state universities and land-grant colleges report that top coaches can be paid as much as \$18,000.

The median salary paid to presidents of state, private and municipal universities is \$15,000. Top salaries of \$23,628 are reported by some state universities and land-grant colleges. The lowest salary reported by small private colleges is \$4200.

While not all college professors are underpaid and not all coaches are overpaid, college teachers as a group average less than physicians, lawyers and other major professions, Dr. Hubbard points out.

According to the Survey of Current Business (July 1952), published by the U.S. Department of Commerce, the median annual net incomes (income after deduction of business expenses) of the three largest professions are: physicians, \$10,285; dentists, \$6501, and lawyers, \$6956.

Among other comparisons of median annual salaries in various types of institutions presented in the N.E.A. research bulletin are:

	State Univ.	Land-Grant	Teachers Coll.	500 or less
Dean of Administration.....	\$9950	\$9725	\$7406	\$5325
Dean of Men.....	7250	6904	5507	4000
Dean of Women.....	6300	6300	5275	3400
Business Manager.....	9500	9368	5598	4925
Head Coach.....	8800	9540	5000	4000
Director of Athletics.....	8045	8045	5350	4400
Director of Research.....	6818	6600	5550
Registrar.....	6700	6800	5100	3350
Librarian.....	7500	7000	4800	3600

New Two-Year Course in Institutional Management

NEW YORK.—Columbia University recently announced the establishment of a two-year program in institutional management, which has been designed specifically for institutional purchasing agents and others personally associated with procurement of institutional supplies and equipment.

The curriculum has been developed primarily for specific types of training for purchasing and for department heads. It will include basic courses in economics, accounting, psychology and sociology and also will provide special training for those working in hotels,

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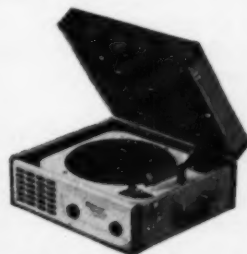
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mendous versatility with its TWO powerful motors and TWO recording heads. This *exclusive* Webcor feature invites recording to TWO full hours **WITHOUT INCONVENIENT REEL TURNOVER**. This alone makes the Webcor perfect for speech, drama and music departments where it is impractical to interrupt a performance under two hours.

A Webcor Tape Recorder records at two speeds; slow for normal recordings, fast for more critical, high-fidelity recordings. A Webcor operates with split-second action with one simple knob. Any student or teacher can record, playback or erase with considerable skill after two minutes of introduction. Learn more about getting a famous Webcor Tape Recorder for your school. You'll find the name of your Webcor dealer in the classified telephone directory. Or write Webcor, Chicago 39, Illinois. Only \$207.50.

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NEWS

hospitals and educational institutions. While no prerequisites are required, the courses offered are at the university level.

Those who will serve on the faculty during the spring term include Forrest L. Abbott, controller and business manager, Barnard College; John H. Keig, controller, the Society of the New York Hospital; Dr. Clement Clay, administrator, Hospital Center, Orange, N.J.; Kenneth A. Lane, director of employer-employee relations depart-

ment, American Hotel Association, and Dewey H. Palmer, research director, Hospital Bureau of Standards and Supplies, Inc.

Concerned Over Recent Publicity

CAMBRIDGE, MASS.—Dr. Nathan M. Pusey, president of Harvard University, in his first report to the board of overseers expressed concern that there be a better understanding of the insti-

tution's "true story" both within and without the community.

Dr. Pusey stated that although "some careless unfavorable remarks have been made recently to the press about certain Harvard teachers, the facts, at least concerning all but a minuscule fraction, are clearly wholly other than these would suggest."

Utah Junior Colleges Under Church Control

SALT LAKE CITY, UTAH.—The Utah state legislature recently voted to abandon its public junior college system and return it to church control. The colleges—Weber, Snow and Dixie—return to the control of the Church of Jesus Christ of Latter Day Saints. Prior to 1933, these three colleges were controlled by the Mormon Church. The fourth college, Carbon College, never a Mormon institution, will be closed for the current academic year.

The action was taken as a result of a proposal by Gov. J. Bracken Lee to close the colleges in order to reduce expenditures by the state.

However, at the time the action on closing the colleges was proposed, legislative approval was given to the average wage increase of teachers of about \$200 per annum. The legislature also adopted, over the veto of Governor Lee, a 2 cent increase in the cigaret tax that will earmark approximately \$1,500,000 annually for school needs.

Observers in Utah indicated that court action in regard to the closing of junior colleges would probably be instituted shortly. A considerable group in the state contends that the action of returning state property to a private church organization is illegal.

Spirit Duplicators May Be Health Hazards

BOSTON.—At a recent meeting of the American Association for the Advancement of Science, an industrial hygienist, R. G. McAllister of Liberty Mutual Insurance Company, called attention to the possible health hazard of business office and schoolroom duplicating machines being used in confined rooms.

High concentrations of methyl alcohol vapors were found in samples of air collected in a small room in which so-called spirit duplicating machines

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Model 1-1632-31 for beds, chairs, bureaus—all kinds of wood and metal furniture.

Model 2-3056-65 for light trucks and portable equipment.

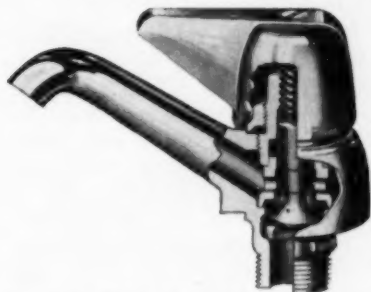
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NEWS

were operated, the hygienist reported. The chemical is employed in picking up a typewritten reproduction in the machine.

"Doubtless, many of the rooms in which the spirit duplicators are located are no larger than the room tested. Such being the case, there is good reason to believe an appreciable number of workers across the nation are exposed to excessive methanol (methyl alcohol) concentrations."

As a result of experimental studies, Mr. McAllister recommended that the following action be taken in regard to operation of spirit duplicators: (1) Avoid their use in small offices that lack exhaust ventilation. (2) When machines are operated steadily in small rooms, provide a hood over the basket receiving the papers rolled out of the machine to dilute and waft vapors away from the immediate area.

Warn of Shortage in Trained Scientists

NEW YORK.—According to a recent survey made by Benjamin Fine of the *New York Times*, there has been a

substantial drop in the number of graduate students in recent years. According to responsible educators, much of this decline is attributed to local Selective Service bureaus. It was stated that local draft boards are reclassifying graduate students 1-A before they have completed their programs.

Educators are concerned with this trend because of the possibility that such action will result in a critical shortage of trained scientists and other personnel at a time when the nation is not able to afford such a shortage.

Ohio State Vaccinates Students for Influenza

COLUMBUS, OHIO.—President Howard L. Bevis of Ohio State University recently announced a program of voluntary influenza vaccination for students. Although medical authorities believe that a flu epidemic is "not probable," the university's immunization program will be offered as a preventive measure.

Dr. Bevis declared that student participation in the vaccination program will not be compulsory and that con-

sent of parents will be preferred. He also recommended that students consult their own physicians concerning the immunization.

U.S.O.E. Reports Effect of Public Law 550

WASHINGTON, D.C.—Male Korean veterans who enrolled in college for the first time last fall followed the general pattern of male nonveterans in choosing between private and public institutions and between low-tuition schools and those with higher rates.

S. M. Brownell, U.S. commissioner of education, made the announcement recently as he reported the preliminary findings of a survey by the Office of Education. The information was based on returns from 1472 (79 per cent) of the nation's 1871 institutions of higher education.

Comparing both full-time and part-time enrollments of Korean veterans with those of nonveterans, Commissioner Brownell said:

"The returns show that in percentage terms the proportion of Korean veterans who enrolled in private colleges and also the proportion of the veterans who enrolled in the higher-tuition institutions was slightly greater than the proportion of nonveterans on both points.

"Of all male Korean veterans entering college for the first time, 44.5 per cent enrolled in private institutions as against 43.4 per cent of the nonveterans. At the same time, 52 per cent of the veterans enrolled in the higher-tuition colleges—those with tuition and required fees of \$200 or more a year—as compared with 49.1 per cent of nonveterans.

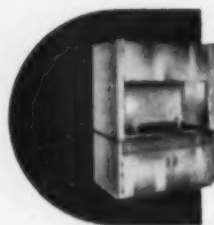
"If only full-time students are considered, the percentages shift slightly in the opposite direction, and the proportion of nonveterans attending private and higher-tuition colleges exceeds the proportion of Korean veterans. Thus, for full-time students only, the percentage of first-time male Korean veterans enrolled in the higher-tuition institutions is 46.6 per cent, as compared with 49.4 per cent of the first-time male nonveterans. Similarly, for full-time students only, the percentage of Korean veterans enrolled in private institutions is 40.1 per cent, as compared with 44.2 per cent of the nonveterans.

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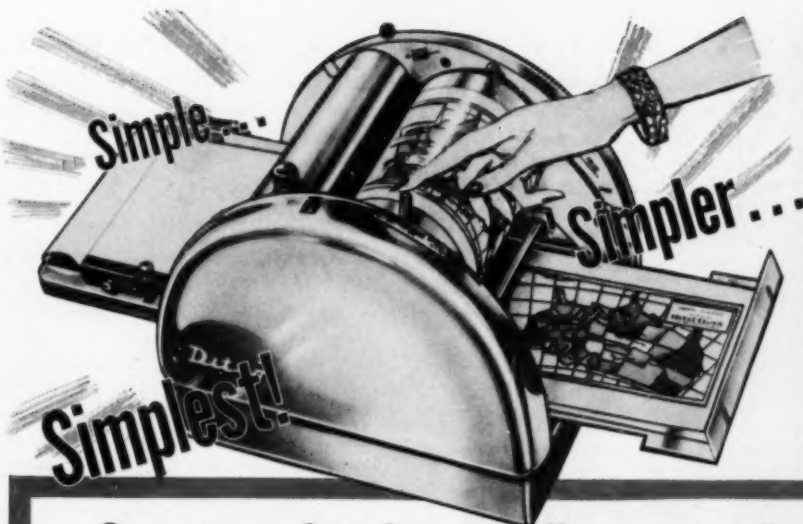
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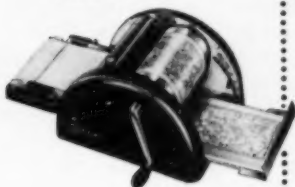
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NEWS

sidered, however, the information received to date shows no large differences between the veterans and the nonveterans on the points covered in the survey.

"These preliminary returns represent male Korean veteran and male nonveteran first-time enrollments in 74 per cent of the nation's publicly controlled institutions and 81 per cent of the private colleges and universities," Commissioner Brownell said. "They cover nearly 30,000 male Kor-

ean veterans and more than 202,000 male nonveteran first-time students. Returns still to be compiled from some 400 additional institutions may modify the survey findings in some respects.

"The Office of Education is releasing the information at this time as a service to the nation's institutions of higher education and to other groups throughout the United States interested in planning for the higher education of American youth. A final comprehensive report presenting all

data in greater detail will be issued when the returns are substantially complete."

Honor Students May Skip Classes

NOTRE DAME, IND.—More than 475 Notre Dame honor students may be absent from class an unlimited number of times, according to a new university regulation announced by the Rev. Philip S. Moore, C.S.C. vice president in charge of academic affairs.

Undergraduates named on the dean's honor list as having academic averages of 88 per cent or higher may skip class without penalty but will be held personally responsible for any class work or tests missed by being absent, Father Moore explained.

NAMES IN THE NEWS

Dr. Theodore A. Distler, for the last 12 years president of Franklin and Marshall College, Lancaster, Pa., has been made executive director of the



Guy E. Snively



Theodore Distler

Association of American Colleges. He will succeed Dr. Guy E. Snively, who has held the position for 17 years. Dr. Distler, before going to Franklin and Marshall College, had been dean of Lafayette College from 1934 to 1941.

Dr. A. Hollis Edens, president of Duke University, Durham, N.C., was elected president of the National Association of Methodist Schools and Colleges at its annual meeting held in Cincinnati last month. Dr. Edens succeeds Dr. Earl A. Roadman, president of Morningside College, Sioux City, Iowa.

Dr. Frederick A. Middlebush resigned January 8 after serving 18 years as president of the University of Missouri, Columbia. His doctor has advised him to curtail his activities. The resignation becomes effective June 30.

Eugene M. Austin, pastor of Baptist Temple at Charleston, W.Va., has been appointed assistant to the president of Colby Junior College, New London, N.H. Dr. Austin will succeed H. Leslie

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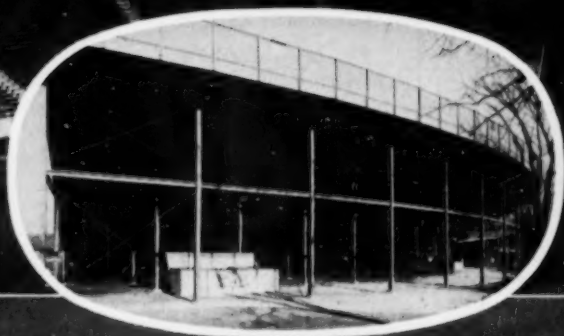


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NAMES

Sawyer as president upon the latter's retirement in June 1955.

J. A. Ramos, former member of the business office staff at Agricultural, Mechanical & Normal College, Pine Bluff, Ark., has accepted appointment as controller of Alcorn College, Alcorn, Miss.

C. S. Wells, former accountant and auditor of Prairie View College, Prairie View, Tex., has been named auditor and coordinator of the business office at Texas Southern University, Houston.

William I. Emerson, vice president for university development, Cornell University, recently announced his resignation for reasons of health and in the realization that the work of the development office required active leadership.

Carleton Harrison, director of the youth development program of the Puerto Rican Y.M.C.A., San Juan, was recently appointed vice president for development of Springfield College, Springfield, Mass.

Edward S. Babbitt of New York City, for the last seven years general auditor for Western Newspaper Union, has been named controller of Mount Holyoke College, South Hadley, Mass. Mr. Babbitt will succeed **Donald S. Willard**, who resigned to accept a position with the Teachers Insurance and Annuity Association of America.



E. S. Babbitt

Dr. Lewis Eldred has resigned the presidency of Elmira College, Elmira, N.Y., to become vice president in charge of academic affairs at the college. His resignation will become effective July 1. He has been president since 1949.

Dr. Miller Upton, 37 year old dean of the school of business and public administration at Washington University, St. Louis, has been appointed



Miller Upton



Harold Wood

president of Beloit College, Beloit, Wis. Dean Upton succeeds **Dr. Carey Cronies**, who resigned to accept the posts of provost and professor of geology at Rice Institute, Houston, Tex. Dr. Upton will take up his new duties in June; in the interim, **Harold Wood**, vice president, is acting president.

Stuart H. Simpson, formerly assistant to the president of Wayland Academy, Beaver Dam, Wis., has been named assistant to the president of Kalamazoo College, Kalamazoo, Mich. In his new position he will serve under **Dr. Weimer K. Hicks**, recently appointed president of Kalamazoo and former head of Wayland Academy.

David A. Lockmiller, president of the University of Chattanooga, was named "Man of the Year" by the Chattanooga Kiwanis Club, Chattanooga, Tenn. Dr. Lockmiller was presented with the award for "distinguished service to his fellow citizens as educator, and as a leader in promoting higher cultural and enlightened patriotic citizenship."

(Continued on Page 72)

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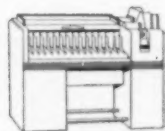
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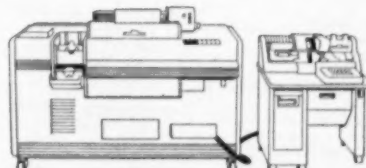
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NAMES

Harold P. Rodes, 34, has been named fifth president of Bradley University, Peoria, Ill., to succeed David B. Owen, who retired in December 1952 because of ill health. Dr. Rodes has been president of Ohio Mechanics Institute, Cincinnati, since 1951. Prior to that he was assistant professor of engineering and an assistant director of relations with schools in the University of California at Los Angeles.

William S. Kerr, executive assistant to the president of the Chicago, Burlington and Quincy Railroad, became business manager of Northwestern Uni-



William S. Kerr



Harry L. Wells

versity on February 1. Mr. Kerr succeeds Harry L. Wells, who will continue as vice president of the university until September 1, when he will retire
(Continued on Page 74)

DIRECTORY OF ASSOCIATIONS

National Federation of College and University Business Officer Associations

President: Irwin K. French, Wellesley College; vice president: Gerald D. Henderson, Vanderbilt University; secretary-treasurer: Nelson A. Wahlstrom, University of Washington.

Association of College and University Business Officers

American Association

President: J. B. Cephas, Virginia State College; secretary: L. H. Foster Jr., Tuskegee Institute.

Convention: May 2-4, Lincoln University, Jefferson City, Mo.

Central Association

President: Jacob Taylor, Ohio State University; secretary-treasurer: T. N. McClure, Knox College.

Convention: April 25-27, Oklahoma A.&M. College, Stillwater.

Eastern Association

President: John W. S. Littlefield, Colgate University; secretary-treasurer: Irwin K. French, Wellesley College.

Convention: Dec. 5-7, Shoreham Hotel, Washington, D.C.

Southern Association

President: J. H. Dewberry, University System of Georgia; secretary-treasurer: Gerald D. Henderson, Vanderbilt University. Convention: April 28-May 1, Raleigh, N.C.

Western Association

President: George W. Green, California Institute of Technology; secretary: Duncan McFadden, Stanford University.

Convention: May 9-11, Rickey's Studio Inn, Palo Alto, Calif.

Association of Physical Plant Administrators of Universities and Colleges

President: Sam Brewster, Alabama Polytechnic Institute; secretary-treasurer: A. F. Gallistel, University of Wisconsin.

Convention: May 3-5, California Institute of Technology, Pasadena.

Association of College Unions

President: Louis Day Jr., University of Pennsylvania; secretary-treasurer: Edgar A. Whiting, Cornell University; editor of publication: Porter Butts, University of Wisconsin.

Convention: April 25-28, Edgewater Beach Hotel, Chicago.

National Association of Educational Buyers

President: Forrest Abbott, Barnard College; executive secretary: Bert C. Ahrens, 1461 Franklin Ave., Garden City, N.Y.

Convention: May 5-7, Huntington Hotel, Pasadena, Calif.

American College Public Relations Association

President: Mrs. Veta Lee Smith, Marshall College, Huntington, W.Va.; executive secretary: Marvin W. Topping, 726 Jackson Place, N.W., Washington 6, D.C.

Convention: June 21-24, Hotel Roosevelt, New York City.

National Association of College Stores

President: R. C. Avery, Cornell Campus Store, Ithaca, N.Y.; executive secretary: Russell Reynolds, Box 58, 33 West College Street, Oberlin, Ohio.

Convention: April 20-23, Sherman Hotel, Chicago.

College and University Personnel Association

President: Max W. Sappenfield, University of Indiana Medical Center, Indianapolis; secretary-treasurer: Clara Stimson, University of Rochester; executive secretary: Donald E. Dickason, University of Illinois. Permanent headquarters, 809 S. Wright St., Champaign, Ill.

Convention: August 1954, University of California and California Institute of Technology.

National Association of College and University Housing Officers

President: J. C. Schilleter, Iowa State College; vice president: M. R. Shaw, Cornell University; secretary-treasurer: Ruth N. Donnelly, University of California, Berkeley.

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UNIVERSITY OF MICHIGAN

Minneapolis, Minn.

BALL PARKS

CLEVELAND STADIUM

Cleveland, Ohio

YANKEE STADIUM

New York, N.Y.

FENWAY PARK

Boston, Mass.

MILWAUKEE STADIUM

Milwaukee, Wisc.

BRIGGS STADIUM

Detroit, Mich.

GRIFFITH STADIUM

Washington, D. C.

COMISKEY PARK

Chicago, Ill.

Write or Wire

The OSBORN ENGINEERING Company

7016 EUCLID AVENUE

CLEVELAND 3, OHIO

Monroe

FOLDING PEDESTAL BANQUET TABLES

WRITE FOR CATALOG
PRICES AND DISCOUNTS

THE ARISTOCRAT OF ALL
FOLDING BANQUET TABLES

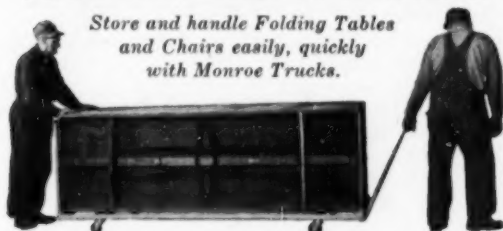
DIRECT PRICES AND DISCOUNTS
TO SCHOOLS, COLLEGES,
CHURCHES AND ALL
ORGANIZATIONS

COMPLETE LINE
OF FOLDING CHAIRS

CHASSIS
"Built like
a Bridge"

MONROE TRUCKS FOR FOLDING TABLES AND CHAIRS

Store and handle Folding Tables
and Chairs easily, quickly
with Monroe Trucks.

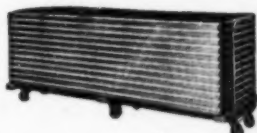


By moving and storing Folding Tables and Chairs on Monroe Trucks, two men can clear a room six times more rapidly than when the tables and chairs are carried by hand. Table Truck No. TS illustrated above.



Chair Truck No. TSC transports and stores up to 40 chairs, depending on make.

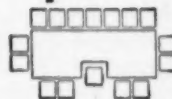
Transport Truck No. TF. Twelve Monroe Tables on Truck stack only 29" high.



KINDERGARTEN TEACHER'S FOLDING TABLES



There'll be more class interest, better control when Teacher sits with the class. (See seating chart at right.) Table fully adjustable from 20 to 30 inches.



ADJUSTABLE HEIGHT TABLES



For use in the Kindergarten or Intermediate Grades at any height, 20" to 30". When extended to full 30" may be used with other tables for adult dinners.

WRITE FOR NEW 1954
CATALOG WITH TABLES
IN FULL COLOR AND
CURRENT DISCOUNTS



THE *Monroe*

77 CHURCH ST.



Company

COLFAX, IOWA

NAMES

at the age of 65 years in accordance with the university retirement program.



William E. Camp Jr.

William E. Camp Jr., treasurer of Kenyon College, Gambier, Ohio, has been appointed treasurer and business manager of Wells College, Aurora, N.Y.

His appointment will become effective July 1. Mr. Camp will succeed **Jerome H. Bentley**, who retires June 30 after 17 months as acting president and president of the college.

Ernest M. Hayes, bursar and business manager of Bard College, Annandale-on-Hudson, N.Y., for the last 10 years, is the new chief accountant at Wittenberg College, Springfield, Ohio. He succeeds **Earl Marshall**, controller from 1926 until his retirement in December. Born in China, the son of Presbyterian missionary parents, Mr. Hayes spent much of his life in that country before the Shanghai American School, of which he had been principal and business manager, became a Japanese concentration camp at the start of World War II. Earlier he had been associate general treasurer of the China missions for the Board of Foreign Missions, Presbyterian Church in the U.S.A., for 11 years. Mr. Hayes' new appointment became effective January 1.

Ethan A. H. Shepley, president of the board of directors of Washington University, St. Louis, has been named acting chancellor until appointment of a permanent successor to **Arthur H. Compton** is named.

Harold C. McClellan, recently elected president of the National Association of Manufacturers, is president of the board of trustees of Occidental College, Los Angeles.

Mother Mary Aloysia, founder and first president of Our Lady of Good Counsel College, White Plains, N.Y., died recently after a brief illness. She was 84 years old.

Mrs. Elsie A. Merriman, founder of Mills College of Education in New York, died recently at 93 years of age. She had retired from her position with the institution in 1931.



Ernest M. Hayes

classified advertising

POSITIONS WANTED

Accountant—With 27 years varied experience wants position as business manager, controller, or chief accountant of small college or university in the east; available immediately. Write Box CW 172 COLLEGE AND UNIVERSITY BUSINESS.

Buildings and Grounds—Broad experience and mature judgment with engineering background, presently employed, interested in responsible position. Write Box CW 194, COLLEGE AND UNIVERSITY BUSINESS.

Business Management—College business manager desires opportunity make better investment training and experience, including accounting, purchasing, personnel and financial administration. Write Box CW 191, COLLEGE AND UNIVERSITY BUSINESS.

Business Manager—Available for college or university comptroller's department; aggressive, efficient, diplomatic, family man, age 35 with B.S. degree in Business & Economics; considerable administrative experience especially in budgeting, and accounting; served as treasurer several years with American overseas mission. Write 626 W. Beardsley Ave., Elkhart, Indiana.

College Union Director—Male; five years experience as student assistant and as director of college union and dormitories; experienced in opening and organizing new project; experienced in university and small college operation. Write Box CW 179, COLLEGE AND UNIVERSITY BUSINESS.

Food Administrator—Years of experience in colleges and institutions; experienced in all phases of operations; desires position in supervisory capacity. Write Box CW 196, COLLEGE AND UNIVERSITY BUSINESS.

Food Service Director—Twenty-five years of experience, desires position with midwestern college or university; excellent references; available anytime. Write Box CW 193, COLLEGE AND UNIVERSITY BUSINESS.

Superintendent of Buildings and Grounds—Graduate engineer; five years experience in large midwestern university as superintendent;

administrative experience in university maintenance, construction, operation, purchasing, planning, rentals, and organization; experienced industrial maintenance engineering; excellent references. Write Box CW 192, COLLEGE AND UNIVERSITY BUSINESS.

Top Flight Business Administrator—Expert on surveys, budgetary controls, systems, reports, investment supervision; outstanding record; salary to fit budget. Write Box CW 188, COLLEGE AND UNIVERSITY BUSINESS.

POSITIONS OPEN

Accountant-Auditor—Mid-west university; background in auditing and purchasing desirable; position available immediately; in reply give complete personal history and training. Write Box CO 136, COLLEGE AND UNIVERSITY BUSINESS.

Assistant Bookstore Manager—For New England co-educational college located in small town; in reply give resumé of training, background, and salary required. Write Box CO 134, COLLEGE AND UNIVERSITY BUSINESS.

Plant Superintendent (At once—Permanent)—State school in large southwestern city; graduate engineer or equivalent in experience; medical school, approximately 400 students, large campus; building program under construction; must have person capable to assume responsibility for all maintenance upkeep of buildings, roads, utilities, transportation, with emphasis on complex air conditioning and scientific laboratory installation; give resumé of training and experience, salary request, when available. Write Box CO 137, COLLEGE AND UNIVERSITY BUSINESS.

Purchasing Agent—Administrator to supervise centralized purchasing, duplicating services, and book store at large eastern seaboard college. Write Box CO 135, COLLEGE AND UNIVERSITY BUSINESS.

The rates for classified advertisements are: 20 cents a word; minimum charge, \$4. (No charge for "key" number.)

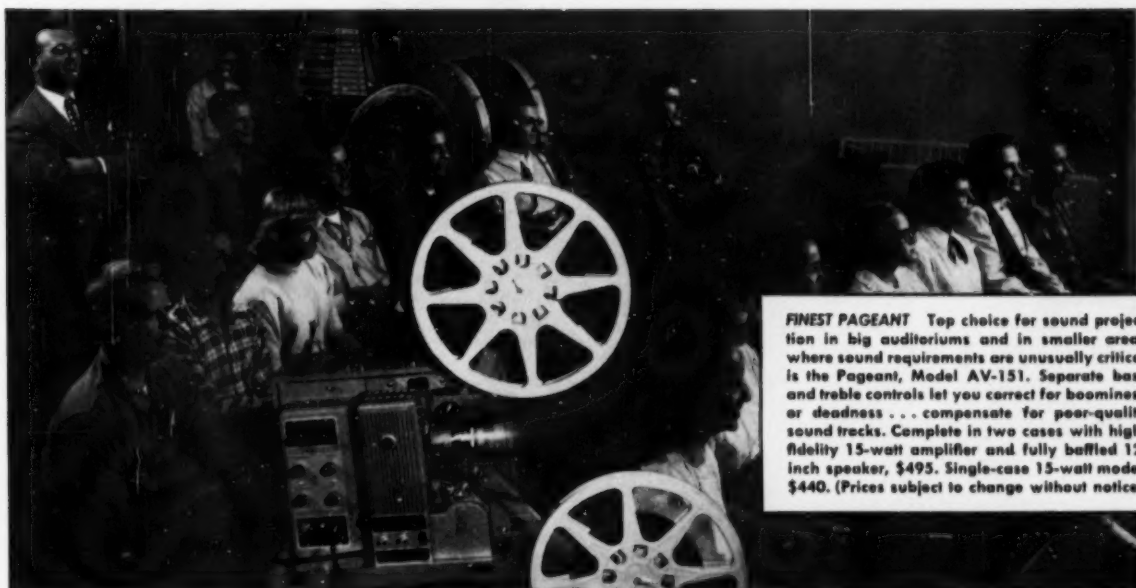
Forms close 25th of month preceding date of issue.

Address replies to

COLLEGE AND UNIVERSITY BUSINESS

919 N. Michigan Avenue, Chicago 11, Ill.

COLLEGE and UNIVERSITY BUSINESS



FINEST PAGEANT Top choice for sound projection in big auditoriums and in smaller areas where sound requirements are unusually critical is the Pageant, Model AV-151. Separate bass and treble controls let you correct for boominess or deadness . . . compensate for poor-quality sound tracks. Complete in two cases with high-fidelity 15-watt amplifier and fully baffled 12-inch speaker, \$495. Single-case 15-watt model, \$440. (Prices subject to change without notice.)

When sound must be right . . . only a Pageant will do!

. . . because only the Pageant has built-in sound focusing.

IN music instruction and in dozens of other fields where 16mm. movies are used for instructional purposes, sound *must* be right. Tones must be true throughout a full frequency range from the boom of the bass drum to the tinkle of a glockenspiel.

For such applications, more and more schools are specifying Kodascope Pageant Sound Projectors, for these machines—and these alone—are equipped with a built-in sound-focusing control which makes possible full fidelity in 16mm. sound reproduction. In conventional sound systems, the scanning beam is fixed. If the beam in such systems is set for reproduction with original film, fidelity falls off when you run "duplicates." And if it's adjusted for "duplicates," quality falls off when you run originals.

Only a Pageant permits *exact* sound focus on *all* types of film. Kodak's exclusive Fidelity Control lets you adjust the scanning beam for quality reproduction with any type of 16mm. optical sound film, regardless of the position of the sound track!

And only a Pageant can give you all these other important sound-projector features: Permanent pre-lubrication—another Pageant exclusive—eliminates the need for oiling maintenance, lengthens projector life, and helps to make the projector out-

standingly, *permanently*, quiet in operation. A unique field-sharpening element built into the standard lens corrects for the curvature of field existent in all conventional projection lenses so as to make possible complete over-all image sharpness. True rating of amplifier output . . . quality speakers of adequate capacity and baffling . . . and the availability of *matched* additional speakers for acoustically difficult conditions—insure that sound can be made ideal . . . *anywhere*. And perhaps most important of all, you pay no premium for Pageant excellence—each Pageant model is the lowest-priced projector in its class!

Pageants for every 16mm. need

There are in all six Pageant models—three sound-and-silent machines and three sound-only projectors equipped with Kodak's super-brilliant Plus-40 Shutter. They range from the 7-watt Model I, economical top choice for average showings . . . to the powerful 15-watt Model AV-151, shown above. This complete range of equipment makes certain that you can fill your requirements with a Pageant *exactly* equipped for the job. See your Kodak Audio-Visual Dealer soon—or mail the coupon below.

Here's what A-V experts say about EXCLUSIVE Pageant pre-lubrication



"Because so many different people—teachers and students alike—operate projectors, proper maintenance is a matter of luck. With permanent lubrication, maintenance is no problem. Anyone who has a Pageant is lucky in more ways than one!"

L. H. Sanborn, Visual Aid Consultant
McCurry Foto Co.
Sacramento, California



"Our experience indicates clearly that hit-or-miss lubrication is the chief cause of damage to school projection equipment. The Pageant Projector's permanent pre-lubrication totally eliminates this problem—and we're happy to endorse it."

Charles Baum
Baum's Sporting Goods, Inc.
Sunbury, Pa.



"No wonder the Kodascope Pageant Sound Projector is gaining popularity so rapidly. Its exclusive pre-lubrication feature completely eliminates the possibility of under- or over-oiling . . . the primary cause of damage to 16mm. projection equipment."

Paul Rubenstein
Tampa Movie Center
Tampa, Florida



"Our experience has proven clearly that the pre-lubrication feature of the Kodascope Pageant Sound Projector is the logical answer to a good many of our service problems. We cannot recommend the Pageant Projector too highly."

Harold McLarey
Grimm-Williams Co.
Little Rock, Arkansas

EASTMAN KODAK COMPANY

Dept. 8-V, Rochester 4, N. Y.

2-96

Please send me the name and address of my nearest Kodak Audio-Visual Dealer and further information about Kodascope Pageant Sound Projectors.

NAME

ORGANIZATION

ADDRESS

CITY (Zone)

STATE

Kodak



New York University Law School, New York City. Architects: Eggers and Higgins.

NEW AMERICAN UNIVERSAL PEDESTAL TABLES

improve lecture-demonstration teaching

Check these advantages—assured by American Universal Pedestal Tables with No. 406 Pedestal Chairs, but not afforded by other furniture:

1. All Students can see instructor and demonstrations.
2. Swivel chairs provide greater freedom to perform, easier ingress and egress.
3. Ample passageway is maintained between chair backs and tables.
4. Easy to clean, easy to clean around.
5. More efficient use of space, because each installation is tailored to the room.

Continuous working surfaces, in straight rows, or on a radius, can be provided only with American Universal Pedestal Tables. Equally effective in large or small rooms, on level or sloping floors, with or without risers. The offset steel pedestals leave ample leg room.

Table tops are urea-resin bonded, heavy, cored plywood; available with book-storage compartments. The comfortable cradleform swivel seats have deep-curved backs and are adjustable in height; backs and seats are bonded plywood, and, like table tops, are durably lacquered in natural-birch finish.

Let our expert seating engineers help design an installation to fit your individual needs. Just write us for complete information—no obligation.

American Bodiform Auditorium Chairs

Full-upholstered—most beautiful and practical auditorium chairs. The ultimate in comfort, durability, acoustical benefit. Available with or without folding tablet arm.

American Seating Company

WORLD'S LEADER IN PUBLIC SEATING

Grand Rapids 2, Mich. Branch Offices and Distributors in Principal Cities
Manufacturers of School, Auditorium, Theatre, Church, Transportation, Stadium Seating, and Folding Chairs.



Women are discreet instinctively. The modern powder room is equipped with the SANIBAG method of quick, modest disposal of sanitary napkins. SANIBAG service is practically a must in motels, schools, hotels, restaurants and public buildings.

SANIBAG service not only pays off in good will, but with dollars saved in maintenance costs. Also a tremendous saving in plumber's bills arising from toilet stoppages. To provide SANIBAG service is simply good business judgment.

When writing for free samples and complete information, please include the name and address of your supply merchant.



Beier & Company

409 SOUTH GREEN STREET
CHICAGO 7, ILLINOIS

this sword means Cancer EDUCATION



Words of truth and hope from the American Cancer Society save many lives each year from cancer... could save thousands more.

Under the sign of the cancer sword you and your neighbors can learn vital facts... your physician can secure information on diagnosis and treatment. Cancer Strikes One in Five. Your Dollars Strike Back.

Mail Your Gift to "Cancer"
Care of Your Local Postoffice

AMERICAN
CANCER SOCIETY



In this library, note the striking beauty, the interestingly varied effect created by Acousti-Celotex RANDOM PATTERN Perforated Tile.

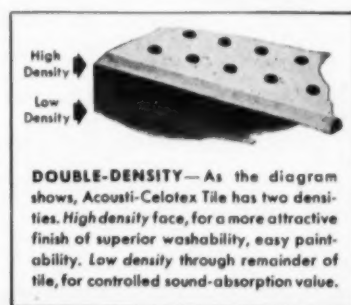
Noise "runs wild" . . . and no one escapes!

Noise . . . the *taken-for-granted* noise of daily campus routine . . . preys on students and faculty members alike. Every hour of every school day, it creates tension and confusion. Interferes with distinct hearing. Makes concentration difficult. Destroys comfort.

Low-Cost Answer

How to control noise? The economical solution, hundreds of schools and colleges have found, is Acousti-Celotex Sound Conditioning! A sound-absorbing ceiling of Acousti-Celotex Tile curbs disturbing noise—brings *quiet comfort* to libraries, study halls, corridors, foy-

ers, gyms, cafeterias. It also corrects faulty acoustics, creates conditions conducive to better hearing in classrooms, auditoriums and music rooms.



Easy Maintenance

Acousti-Celotex Tile is quickly installed, needs no special maintenance. Its exclusive *double-density* features (see diagram) provides excellent sound absorption value plus a surface of unusual beauty and washability. Can be washed *repeatedly* and painted *repeatedly* with no loss of sound-absorbing efficiency!

MAIL COUPON TODAY for a Sound Conditioning Survey Chart that will bring you a *free analysis* of the noise and acoustical problems in your school, plus a factual free booklet, "Sound Conditioning for Schools and Colleges." No obligation!



ACOUSTI-CELOTEX

TRADE MARK

REGISTERED

U. S. PAT. OFF.

Sound Conditioning

Products for Every Sound Conditioning Problem—The Celotex Corporation, 120 S. La Salle St. Chicago 3, Illinois • In Canada: Dominion Sound Equipments, Ltd., Montreal, Quebec

Mail Today

The Celotex Corporation, Dept. T-24
120 S. La Salle St., Chicago 3, Illinois

Without cost or obligation, send me the Acousti-Celotex Sound Conditioning Survey Chart, and your booklet, "Sound Conditioning for Schools and Colleges."

Name _____ Title _____

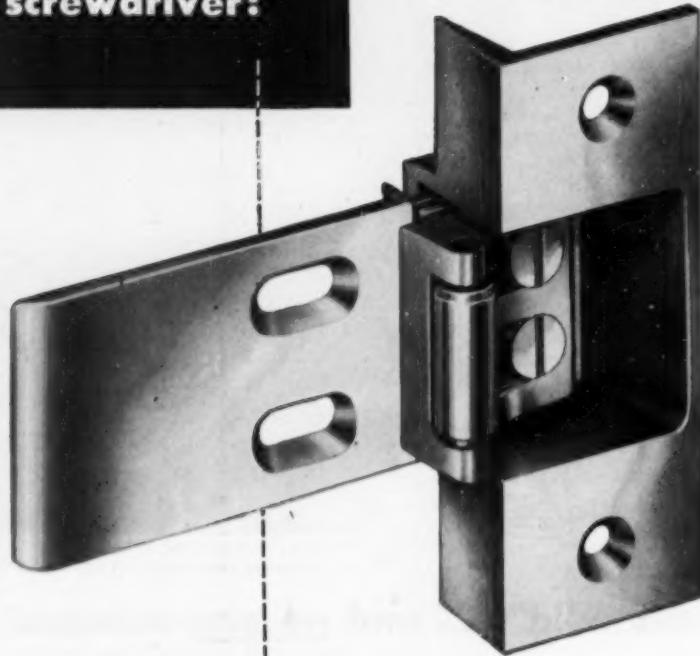
Address _____

City _____ County _____ State _____

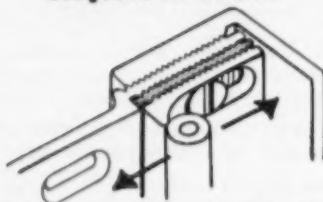
**Doors warped?
You don't need a
carpenter... just
a screwdriver!**

Von Duprin

DUAL-ADJUSTABLE ROLLER STRIKE

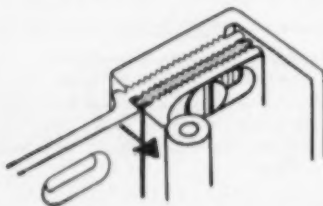


Adjusts in or out



Simply loosen screws and adjust roller strike to desired position.

Adjusts sideways



Remove screws, roller strike assembly, and insert shims as needed.

• The Von Duprin Dual-Adjustable Roller Strike can be quickly adjusted to compensate for doors warped as much as $\frac{3}{8}$ ". Designed for Von Duprin rim-type devices on single doors, or double doors with a mullion. Antifriction roller is supported on monel metal axle. Entire strike is drop forged.

Save money. Keep traffic flowing. Equip *your* doors with Von Duprin devices having Dual-Adjustable Roller Strikes!

Always specify Von Duprin Exit Devices, ... for "the safe way out!"

There's a Von Duprin exit device for every installation... and an experienced Von Duprin representative ready to bring the full facts right to your desk. For the name of the Von Duprin "Exit Specialist" nearest you, write Vonnegut Hardware Co., Von Duprin Division, Indianapolis 9, Ind.



WHAT'S NEW

February 1954

Edited by Bessie Covert

TO HELP you get more information quickly on the new products described in this section, we have provided the postage paid card opposite page 96. Circle the key numbers on the card which correspond with the numbers at the close of each descriptive item in which you are interested. COLLEGE and UNIVERSITY BUSINESS will send your requests to the manufacturers. If you wish other product information, just write us and we shall make every effort to supply it.

Metal Edges on Improved Art Table



A solid basswood top with metal edges is used on the improved Mayline C-7702 Classroom Art Table. The metal edges are applied to both the 20 by 24½ inch drawing section and to the 20 by 10 inch reference top. The metal edges assure greater ease in the use of the T-square and greater protection of drawing edges. The drawing section of the top can be raised through a range of 50 degrees. A hardwood ledge strip at the bottom of the drawing board provides a place to hold pencils, brushes and other equipment while in use. The handy tool drawer at the right hand side of the table holds these supplies when not in use. The sturdy oak base of the table is solidly constructed and finished in golden oak. Mayline Company Inc., Dept. CUB, Sheboygan, Wis. (Key No. 201)

Rubber-Covered Athletic Goods With Extra Long Life

All major advances in the manufacture of rubber and rubber-covered athletic goods have been employed in developing the 1954 Voit line of athletic equipment. The result is added economy and long life in the new line. Improvements in construction methods and materials eliminate uneven wear and retain official specifications during the life of the equipment. Voit's Armor Red for the core is a new reinforced fabric of special red rubber which serves as a cushion and insulates against the wearing action of shock and friction. This, combined with Voit uni-polar construction method, produces a strong core which has no weak spots, because of uniform wrapping and evenly distributed overlap. The new laminated Veon rubber cover applied over this core provides uniform thickness. A new mold design gives the balls more surface, also contributing to long wear.

Other new developments in the Voit

line include a new super-butyl bladder which holds official playing pressure for many months. A new Protector-Kote guards against checking and weathering caused by heat, sun, oxygen and ozone and resists scratching and scuffing. A black and white ring design around the valve, called the "Bullseye," is used to identify the improved 1954 line. W. J. Voit Rubber Co., Dept. CUB, 1600 E. 25th St., Los Angeles 11, Calif. (Key No. 202)

Display Rack for Magazines Simplifies Handling

Popular sized magazines and periodicals can be displayed for easy reference in libraries or classrooms with the new



Halverson Magazine Rack. The 20-P is an all-steel rack designed to fit into any room decoration. It has space for displaying 30 popular sized magazines and newspapers. The dividers and pockets are designed with a backward tilt to protect the publications from bending forward, thus ensuring neatness and simplifying selection and handling. The new rack is 30 inches high and takes up a minimum amount of floor space for the number of publications displayed. It is finished in baked-on gray hammerloid enamel. Halverson Specialty Sales, Dept. CUB, 1219 W. Chestnut St., Chicago 22. (Key No. 203)

Fiberglas Panels Are Fire-Resistant

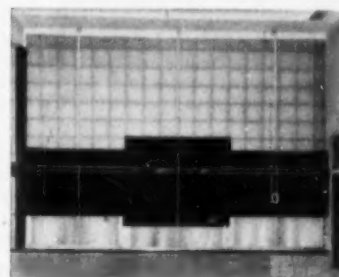
Alsynite #200-FR is a new translucent fiberglas panel which is self-extinguishing and fire-resistant. It is designed for such structural and decorative applica-

tions as skylights, sidelights, partitions, shower doors, awnings and similar uses. Alsynite is made by combining resins and fiberglas under heat and pressure. The new product has good weathering qualities and adequate color stability. Panels are available in maize, light green and opal. Alsynite Company of America, Dept. CUB, 4654 DeSoto St., San Diego 9, Calif. (Key No. 204)

Three Way Shading Unit for Combination Glass Walls

A new and different method of shading combination glass block and clear glass window walls has been developed by the Luther O. Draper Shade Company. Full daylight control and protection are assured in this type of room, regardless of the season, time of day or angles of light refraction. The new units have been especially designed for use on window walls in schools, colleges, hospitals and other public buildings where efficient and economical light control is essential.

The New Way Shade Unit consists of double roller shades which are sufficiently overlapped to prevent direct light gaps and are mounted on the division bar between the clear glass and glass block sections. The upper and lower shades are entirely independent in action, affording complete shade adjustability for the desired daylight. When not in use, the shades are rolled up completely out of the way. Only a simple pulley bracket is mounted at the top of the window wall. For maximum light transmission, the units are furnished with natural, cream-white Dratex cloth, which can be easily washed for long, trouble-free service. Where room darkening is required for film or slide projection, the



shades are fabricated of light color opaque cloth or black Dratex. L. O. Draper Shade Co., Dept. CUB, Spiceland, Ind. (Key No. 205)

(Continued on page 80)

What's New ...

Filmstrip Projectors for Remote Control



Complete control of presentations from any point in a room is now possible with a new series of remote control filmstrip projectors. The "Industrialist," available in 500, 750 and 1000 watt models, incorporates the Synchronwink mechanism for instant advancement of pictures. The user presses a push-button at the end of a 10½ foot cord to advance a picture. The cord may be lengthened by adding one or more 35 foot extensions. Thus, the teacher or lecturer can advance his own pictures without an assistant. The "microfilm" control assures positive framing of each picture as it is advanced. A slide changer for manual projection is standard equipment. Both 35 mm and 2 by 2 inch slides may be projected with the new machines. All are blower cooled with fine precision ground, polished and coated lenses for maximum brilliance, even light distribution and sharply defined images.

The machines are easy and safe to operate with "push-in" style threading, three position safety switch and quick changeover. The complete unit is compact and includes a sturdy carrying case with storage space for slides, changer, cords and film cans. The new machines were developed jointly by DuKane Corporation, St. Charles, Ill. and The Society for Visual Education, Inc., Dept. CUB, 1345 West Diversey Parkway, Chicago 14. (Key No. 206)

Ice Flake Machine in Six New Models

Six new models of the Scotsman Super-Flaker ice machine have been put on the market. The 1953 line has many engineering changes and modifications. Two completely new models have increased capacity designed to produce 1000 pounds of ice per day. Machines are available in either completely automatic storage-type unit or the continuous-flow type. The units feature low operating cost, and the new patented freezing and flaking mechanism is simple and trouble-free. New features include a completely sealed refrigeration system, safety cut-off, heavy duty self-aligning worm bearing and new type sealed insulation. The Queen Stove Works, Dept. CUB, Albert Lea, Minn. (Key No. 207)

Protection and Beauty in Wire Glass

Polished Misco is a new wire glass combining the utmost in protection with modern beauty. The almost inconspicuous diamond netting results in an attractive glass which retains all the fire retardant qualities of wire glass and meets the requirements of the Underwriters' Laboratories for any application in which the use of wire glass is permissible. The new product was developed as a result of many requests from architects and engineers for a more attractive protective glass. It is designed to remain in an opening even after cracking or accidental breakage, thus making it suitable for use in skylights, overhead glazing, vertical window sash or situations in which flying glass would be dangerous. Mississippi Glass Co., Dept. CUB, 88 Angelica St., St. Louis 7, Mo. (Key No. 208)

Quick Heat to Remote Radiators

Remote radiators, mains, risers and cold areas can be quickly heated without the necessity of overheating the entire system with the Heat-Timer Vari-valve. A heavy-duty phosphor bronze



bellows inside the patented all purpose air valve provides positive closing of a large venting orifice, thus assuring rapid venting. The venting return can be varied to meet requirements, thus bringing heat quickly to places of need and resulting in fuel saving.

When Varivalves are used to replace ordinary valves the orifice can be adjusted for a perfect balance throughout the heating system. Operation is noiseless. Varivalve is designed to operate on any one inch steam system. Heat-Timer Corp., Dept. CUB, 657 Broadway, New York 12. (Key No. 209)

Cellulose Dinner Napkins Are Soft Yet Strong

A new 3 ply Dinner Napkin has been added to the Supersoft line. The napkin is made with new Cellosstrength, a new, improved wetstrength with great absorbency. The addition makes Supersoft napkins now available in 2 ply, 3 ply and 4 ply wetstrength, providing attractive and durable paper napkins in varying weights which approximate fabric in feel, appearance and service, yet are expendable and thus save on laundry. Groff Paper Co., Dept. CUB, 2300 Endicott St., St. Paul, Minn. (Key No. 210)

(Continued on page 82)

Individual Package for Ry-Krisp

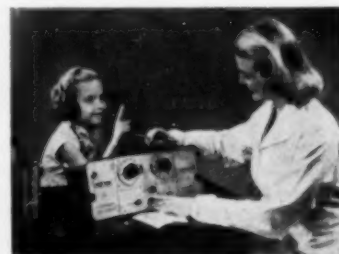
Ry-Krisp, the cracker-like low calorie rye bread product, is now available in sanitary individual serving cellophane packages. With the new package, service is quick and easy and exact portion control is possible. The new pack has been developed for institutional and mass feeding use. Ralston Purina Co., Dept. CUB, Checkerboard Square, St. Louis 2, Mo. (Key No. 211)

Glare Protection Provided by Plastic Film

Protection against the heat, glare and ultra violet rays of the sun can be achieved by use of two new products. Thermoglare Film is a plastic coating which is sprayed on, and Thermoglare Sheet is a solid sheet plastic. When applied to window areas in direct sunlight, they not only increase comfort, but help to reduce air conditioning, fuel and electricity costs. Tests indicate that the new thermoplastics filter out up to 95 per cent of ultra-violet rays and eliminate approximately 80 per cent of infrared transmission. Both the film and the sheet are translucent and are offered in three scientifically balanced colors: blue-green, light gray and frosty white. Eastern Industrial Service, Inc., Dept. CUB, 17 Day St., Cambridge 40, Mass. (Key No. 212)

Screening and Testing Handled by Audiometer

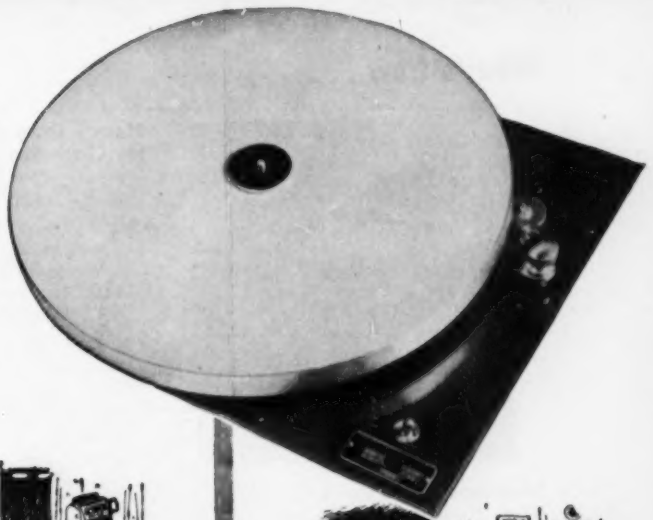
The new Model 71 Sonotone Screening Audiometer has been especially designed to be used both for retest and threshold audiogram measurements and for screening. Weight and proportions make it highly portable, and mechanical and electronic design is such as to provide sturdiness, accuracy, simplicity of operation and dependability. The unit also includes the broader frequency and hearing loss ranges required for retesting in the school hearing-test program and for detailed evaluation of hearing losses of individuals who fail the screening tests. It is an economical, universal instrument for use in school hearing tests and wherever speedy, accurate



screening and meticulous retesting are parts of a hearing conservation program. Sonotone Corporation, Dept. CUB, Elmsford, N.Y. (Key No. 213)

THE PRESTO 15-G TURNTABLE

gives superior reproduction...



for Critical study of masterpiece records in music appreciation classes



for Playback of recordings of dramatic class performances



for Existing sound systems in schools and colleges



for Better sound reproduction with slide or strip film showings



for College radio stations where professional reproduction is desired



for Audio experimentation in Radio and TV engineering classes

Here's a quiet, rumble-free, really accurate turntable with the built-in stamina to stand up under the roughest classroom use. Where the most exacting reproduction standards and precise turntable speed accuracy are desired, the Presto 15-G is miles ahead of ordinary phonograph equipment.

The 12" table is heavily made of cast aluminum, solid, long-lasting. The mechanism is constructed like expensive broadcast-type units. It affords instant selection of three speeds — 78, 33 $\frac{1}{3}$, and 45 rpm.

PRESTO RECORDING CORPORATION

PARAMUS, NEW JERSEY

Export Division: 25 Warren Street, New York 7, N. Y.
Canadian Division: Walter P. Downs, Ltd., Dominion Square Bldg., Montreal

Educators acclaim the Presto 15-G America's finest high fidelity turntable. Yet the price is comfortably within the limits of any school budget — \$53.50.

Presto Recording Corporation
Institutional Sales Division
Paramus, New Jersey

Please send full information on your 15-G Turntable.

NAME _____

ADDRESS _____

CITY _____

ZONE _____ STATE _____

WORLD'S LARGEST MANUFACTURER OF PRECISION RECORDING EQUIPMENT AND DISCS

What's New ...



Maintenance Speeded With Heavy Duty Roller

A new Arscro Roller for heavy duty painting has been developed for use with oil, water or rubber base paints in applications to walls, ceilings, floors and structural steel work. It is made of natural extra high pile lambswool, holds a substantial amount of paint which can be rolled on the surface rapidly, thus cutting painting time, and makes it possible to paint fairly high surfaces without the use of ladders or scaffolds. It is made to attach firmly to any extra long pole so that the top of the wall can be reached easily. It is available in 9, 14 and 18 inch sizes. **The American Products Co., Dept. CUB, 3308 Edson Ave., New York 66. (Key No. 214)**

Heavy Duty Unit for Garbage Disposal

A new heavy duty Garbage Disposal Unit for institutions serving up to several thousand meals a day is now available. Powered by a standard 3 h.p. motor, the unit has cutting and shredding sections of finest controlled quality steel. It is designed to handle all types of table and kitchen refuse except metallic and similar objects. Milk cartons, grapefruit shells, hulls, husks, bones and paper go through without difficulty.

The unit is easily installed, is self-cleaning, and maintenance and service are at a minimum. It is operated by simply turning on the water, pushing the starter button and then feeding in the garbage. The new unit is ruggedly constructed for heavy duty service in institutions. **Enterprise Engine & Machinery Co., Process Div., Dept. CUB G23, 18th & Florida Sts., San Francisco 10, Calif. (Key No. 215)**

"Golden Tone" Ekotape Provides Two Speed Recording

The "Golden Tone" Ekotape is a new model tape recorder designed to play at either $7\frac{1}{2}$ or $3\frac{3}{4}$ inches per second. A single switch selects the speed desired and provides the necessary compensation within the amplifier for the change in speed. Functional styling is combined

with modern appearance in this compact, lightweight unit. Input and output jacks and all controls are grouped at the back of the top panel for easy accessibility. The unit is easy to service, with a minimum number of moving parts, yet provides a range of combinations enabling the listener to set the tone precisely to his taste.

The new model provides either manual or foot control for instantaneous



starting and stopping during recording and playback. A convenient pocket in the cover of the case furnishes storage for microphone and cord and reels of tape. The case is finished in plastic in hunter green and silver gray. **Webster Electric Co., Dept. CUB, 1900 Clark St., Racine, Wis. (Key No. 216)**

(Continued on page 84)



Double Desk, Fawn Oak 830



Arm Chair, Fawn Oak 183

Furniture by HUNTINGTON

—always in good Taste

Huntington high quality furniture is specifically designed for long wear and style appeal for every institutional use—lounging areas, sleeping quarters and executive offices. Both the quality and comfort are guaranteed by strict adherence to high standards of manufacturing. Sold through authorized contract dealers. Designs by Jorgen Hansen and Jens Thuesen.



Permanent Showrooms: Huntington, Chicago and New York

COUPON

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 Company _____
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Attach to your letterhead and mail to: Huntington Chair Corporation, Huntington, W. Va.

Checker

This Modern Steel Rack

Accommodates 50 in 5 Feet!



Keep wraps aired and in press—save space... lengths to fit in anywhere. Individual coat rack units for self-service or complete Check-room layouts with the "One Check" numbering system. Six, 12, and 24 place costumers. Combination rack and locker units or complete locker rooms.

Checker equipment is widely used in schools, public buildings and institutions. Standard with leading architects.

Stationary—Portable. Write for Bulletin No. CK25.



VOGEL-PETERSON CO.
 1121 West 37th St. • Chicago 9, Ill.



514 reasons why every typist should have a Remington Electric Typewriter!

You're looking at 514 (count 'em) genuine U.S. Silver Dollars. They represent the average yearly savings you make, *per typing station*, when you switch from manual to high-speed Remington Electric Typewriters.

Doubtful? So were a lot of people until they read a recent survey made by one of our best customers. This large and impartial organization tested forty-four typists for forty hours on manual machines; then, after a brief transition period, tested the same girls for forty hours on new Remington Electrics. The results were amazing! By switching to Remington Electrics these typists stepped up production (lines typed per day) an average of 21.3%. This added up to a dollar-and-cents

savings of \$514, per typing station, per year. A healthy savings, you'll agree.

How can the Remington Electric give you such savings? Very simply because it is as automatic as a typewriter can be. Electricity takes the work off the typists' hands. Electricity shifts, capitalizes, tabulates, produces *fifteen carbons*, even flicks back the carriage at the touch of a key. When you consider it takes the same effort to return a manual carriage as it does to type a *complete* line; and, when you consider a typist returns the carriage about 1,200 times daily, you'll see how this one automatic feature alone speeds up production.

And the Remington Electric offers another important dividend. Since electricity, *not the typist's finger tips*, con-

trols the impressions, absolute evenness and uniformity are assured. This means that letters—all typing, in fact—will be as sharp, clean and consistently uniform as fine printing.

Let us show you a copy of this complete typewriter study; or send you a free copy of "The Dividends of Remington Electric Typing" (RE8612). Simply write Remington Rand, Room 1792, 315 Fourth Ave., New York 10, N.Y.

Remington Rand

THE FIRST NAME IN TYPEWRITERS



What's New ...

Carbon Ink Marks Plastic Film

A new carbon ink for use on smooth plastic film has recently been introduced. It can be used to mark motion picture film, slides and other plastic visual material. The carbon suspension has the covering power of drawing ink but is so stable that it can be used in some fountain pens. It gives good adhesion on glass smooth cellulose acetate, cellulose nitrate, methacrylate and other water repellent smooth plastic surfaces. Tests have showed strong wear and heat stability. It dries in two minutes and can be made water resistant. The non-clogging black ink can also be used for general purpose drawing. Electrochemical Laboratories, Dept. CUB, 1430 Terrace Drive, Tulsa, Okla. (Key No. 217)

Compact Door Closer With Variable Speed

A small, compact door closing device has been introduced which offers any speed of door closing desired. Known as the Schlage T-500, it is operated by means of a compression spring in conjunction with a hydraulic piston and two adjusting valves. The door can be closed as fast as two seconds or as slow as two minutes without slamming. Any individual with an ordinary screw driver

can make the necessary adjustment by merely making two or three turns on the adjusting screw.

The device is easily installed. A bracket is screwed on the door and the closer and arm quickly slipped into place. A smaller bracket holds the end of the arm to the door frame. The door closer is completely reversible to fit right and left hand doors and is adaptable to



an almost unlimited variety of doors and frames. The new Schlage T-500 Door Closer has undergone severe tests in the laboratory and in actual use, with excellent results. Schlage Lock Co., Dept. CUB, 2201 Bay Shore Blvd., San Francisco 49, Calif. (Key No. 218)

(Continued on page 86)

Wireless Intercom Is Portable

The Port-A-Phone is a portable wireless intercommunication unit which is already wired and needs only to be plugged into an electrical outlet. There are no wires and no installation and it operates on standard AC or DC. A switch is turned to talk or listen and the light weight unit is completely portable. It supplies two-way communication for any purpose, relieves the load on switchboards and simplifies public announcements, among other uses. Monson Corporation, Dept. CUB, 6059 Belmont Ave., Chicago 34. (Key No. 219)

Cold Cathode Ballast Operates Four or Six Lamps

A new 4 lamp cold cathode ballast circuit has been developed which operates four LP or HP FLA Certified cold cathode lamps. It is made in two types, for operating lamps at 100 or 120 MA. Also in production is a new cold cathode ballast to operate six lamps at 100 or 120 MP. Lamps operating on the new 100 MA 4 lamp ballast produce 2230 lumens per lamp and those on the new 120 MA ballast produce 2450 lumens per lamp. Cold Cathode Equipment Co., Dept. CUB, 2349 E. Nine Mile Rd., Hazel Park, Mich. (Key No. 220)



MODEL RSS66
REACH-IN

HERRICK *STAINLESS STEEL REFRIGERATORS

Year-after-year durability, trouble-free performance and economical operation mean HERRICK Stainless Steel Refrigerators actually cost less in the long run than many "inexpensive" units. HERRICK delivers more value, too, in complete food conditioning and lowest expense per year of service. Write for the name of nearest HERRICK supplier.

* Also available with white enamel finish.

HERRICK REFRIGERATOR CO., WATERLOO, IOWA
Dept. C, Commercial Refrigeration Division

HERRICK *The Aristocrat of Refrigerators*



Specified
for
Wellesley
College
Dining
Hall...

Fairhurst Unitfold® folding walls

T.M. Reg.

Designed for easy one-man operation, Fairhurst Unitfold Walls quickly divide rooms to any desired sizes. Separate units join securely to form a rigid, sound resistant wall. Units fold in stacked position or may be concealed in a shallow pocket. Blackboards or other specialized finishes are available. Write for details.



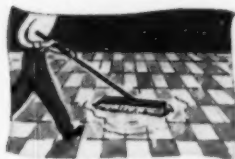
Fairhurst installation at Wellesley College, Wellesley, Mass. Architect: Coolidge, Shepley, Bulfinch & Abbott. Lower view: Units partly open.

John T. Fairhurst Co., Inc.

45 West 45th Street

New York 36, N.Y.

Why Risk Fire with an Oily Dressing?



Oily dressings with even a high flash point constitute a constant fire hazard in daily use.



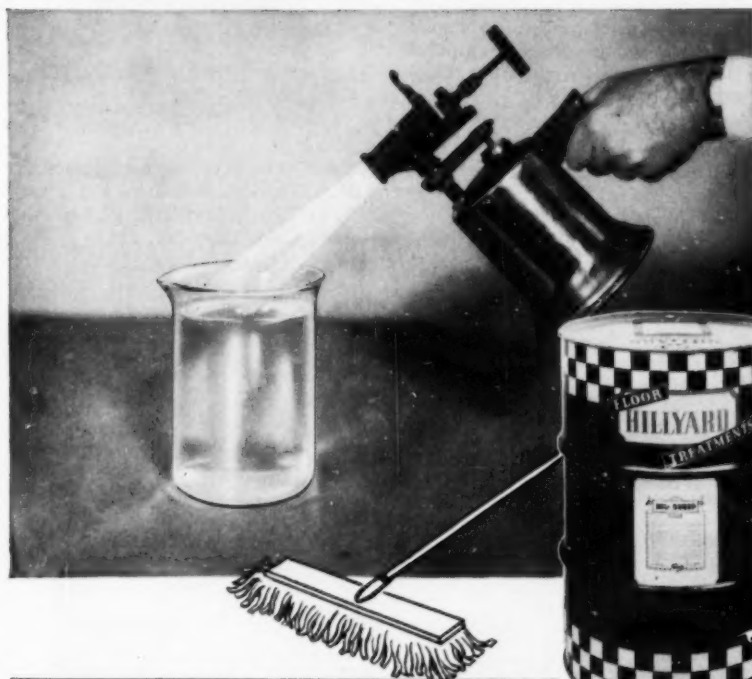
Mops and rags saturated with such solutions when stored often cause spontaneous combustion . . .



Presenting an ever dangerous fire threat and possible serious harm to workers and property.

HIL-SWEEP

maintains floors the FLAME-PROOF way!



fire tests PROVE HIL-SWEEP will NOT BURN

- Rags saturated with Hil-Sweep will not burn or cause spontaneous combustion.
- Eliminates fire hazard in use.
- Safe in storage — Won't freeze at low temperatures. Won't explode at high temperatures.

... on your staff,
not your payroll.

AND LOOK AT THESE OTHER HIL-SWEEP ADVANTAGES

- Hil-Sweep is non-injurious to asphalt tile . . . the result of years of research to develop a maintainer that would be safe for daily care of resilient and all other types of floors.
- You can spray it or sprinkle it on brush, mop or dust cloth.
- Contains no emulsified oil—leaves no oily residue to darken, discolor, soften or bleed colors.
- Will not soften wax film or decrease frictional resistance.
- Won't load mop like other floor dressings. After using simply shake out brush or cloth and it's ready to use again. Saves on laundry and dry cleaning bills.
- Leaves floors cleanly fresh and dust-free, then evaporates.
- Imparts a pleasant aroma where used.

Visit our Booth in Atlantic City Feb. 13 to 18th
American Assn. of School Administrators Booths G11, 13, 15, 17.

MAIL COUPON TODAY

Hillyard Chemical Co., St. Joseph, Mo.

- ☐ Please give me full information on Hil-Sweep.
- ☐ Please have the Hillyard Maintaineer make a Hil-Sweep demonstration on my floors. No charge.

Name

Title

Institution

Address

City

State

What's New ...



Bambino Copying Unit Provides Low-Cost Service

A small, low cost, efficient copying machine has been designed for use in large or small institutions or offices. It makes positive, dry copies of anything written, typed, printed or drawn on translucent paper in a minimum of time. Called the Bambino, the new model is only slightly larger than an electric typewriter. It permits the making of extra copies of any data, for any use, without delay and without re-typing.

The Bambino can be used for pupil or student records. By having one copy of the original record made on translucent paper, any number of additional copies needed can be made quickly for various departments and files. Routine correspondence, reports, orders, invoices and other forms are quickly reproduced with the Bambino. Ozalid, Dept. CUB, Johnson City, N.Y. (Key No. 221)

Educator Projector for Slides and Filmstrips

Slides and single and double frame filmstrips can be shown with the new AO Educator 500 projector. The 500 watt unit incorporates precision optics for maximum illumination and screen images are evenly brilliant, crisp and colorful from edge to edge. Change-over from slides to filmstrip is made by merely inserting or removing slide changer and filmstrip units as desired. The new filmstrip unit cannot damage film and a positive framing device is incorporated with the advancing knob.

Adjustment of picture to screen is easy and rapid with the fingertip controlled elevating lever. The front rotates freely 360 degrees for righting horizontal or vertical frames and ensuring upright pictures. The patented AO push-through slide changer automatically centers glass, cardboard or metal mounted slides. The quiet AC motor driven fan ensures cooling of lamp house, condensing system and both sides of film. American Optical Co., Dept. CUB, Southbridge, Mass. (Key No. 222)

Room Darkening Unnecessary With New Model VisualCast

A new model of the VisualCast for presenting material on a screen for teach-

ing or lecturing is now available. The device permits the instructor or lecturer to face the audience while projecting the material on a screen behind him. The new Challenger Model VisualCast has all glass optics 9 inches in diameter. It projects writing, drawing and transparent pictures on screen or wall, without darkening the room. It is simple to operate, requiring no special training. The speaker can sketch, draw, diagram, write,



erase and re-write on the plastic scroll as he talks. Victorlite Industries, Inc., Dept. CUB, 4117 W. Jefferson Blvd., Los Angeles 16, Calif. (Key No. 223)

(Continued on page 90)

ALL STEEL COMBINATION STORAGE UNITS

Neumade

PROTECTS YOUR FILM!




Model MM-119—A practical storage cabinet for the varied film library. Holds 400, 800, 1200, 1600 ft. reels; 100 filmstrip cans plus utility drawer in base. Overall size: 30" wide, 70" high, 16" deep. Over 50 models to choose from. Write for free catalog.

Neumade

PRODUCTS CORPORATION

330 West 42nd Street
New York 18, N. Y.



Just 9 of 50,000 Items ...

... used daily in every well-run kitchen are shown above as examples of the food preparation and service equipment sold by DON. Your DON salesman can show a lot more that will help you do more ... with less work, less waste and in less time. On all the 50,000 items, satisfaction guaranteed or your money back.

Ask your DON Salesman

or write Department 6

1400 N. Miami Ave.
Miami 32

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Minneapolis 1



2201 S. LA SALLE ST., CHICAGO 16

The Original TABLET ARM CHAIR THAT FOLDS

IMITATED BUT UNEQUALED

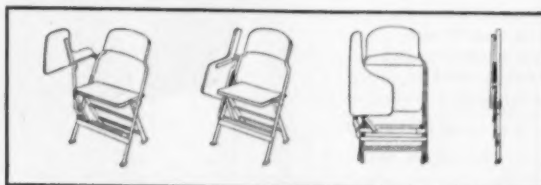
● Only *Clarin* chairs can be used equally well for ordinary seating . . . with the arm folded down at the side.

● Only *Clarin* chairs let you lift the arm out of the way as you sit down or stand up.

● Only *Clarin* chairs are engineered and built to Clarin standards of strength and quality.

Write for full information:
Clarin Mfg. Co., Dept. 9,
4640 W. Harrison St.
Chicago 44, Illinois

FOLDS FLAT IN 3 EASY STEPS



Foam rubber cushioning a CLARIN PLUS feature.

Clarin

There is a Clarin Steel Folding Chair for every age from nursery school to adult—and for every need—the only complete line made. Write for Free Illustrated Catalog.

ENGINEERED QUALITY MAKES THE BIG DIFFERENCE IN FOLDING CHAIRS



Use Space Better
With **"MODERNFOLD"**
—the better folding door

Folding "Modernfold" walls—that change the shape of space in seconds—make this room serve equally for classrooms or as a recreation area. "Modernfold"—the *better* folding door assures you this versatility for years to come! It's made to last *longer*, give *more* years of trouble-free service than any other folding door on today's market.



"Modernfold" is available in sizes to fit any opening, or solve any room division problem. Covering is finest obtainable vinyl fabric—needs no paint, washes with soap and water.

Consult your "Modernfold" distributor (listed under "doors" in your city classified directory) today. Or mail coupon.

Only "Modernfold" has opposing *double* hinges both top and bottom. "Modernfold" folds evenly, *along its center line* instead of zig-zagging from side to side. This prevents warp and twist—means greater strength, longer life, better appearance.

See us at the American Association of School Administrators Show at Atlantic City, February 13 to 18 in booth A-52.



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Please send full details on "Modernfold" doors.

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City..... County..... State.....



5321 for two
53 x 30 x 29"

5322 for three
70 x 30 x 29"

engineered for public use

sculptured and suspended . . . 1-2-3 unit settees by Thonet designed for modern beauty and comfort yet sturdily constructed* for lasting durability in public use.

*THONET'S famous bending and molding processes eliminate troublesome glue joints.



INSTITUTIONAL SEATING

SPECIALISTS SINCE 1830

Tell us your needs.—We'll send full illustrative material.
THONET INDUSTRIES INC. dept. H2
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Showrooms:
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Dallas • Statesville, N. C.



5320 for one
28 x 30 x 29"
all with 4" molded rubber seats and backs

Johns-Manville **TERRAFLEX** tile,

made of vinyl plastics and asbestos,
offers advantages never before
combined in one type of flooring



COLORS ARE CLEARER

The vivid colors of Johns-Manville Terraflex Flooring have a clarity and warmth that add beauty to any interior—keep their *first day newness* for a lifetime. The wide range of marbleized colors in harmonious and contrasting shades offers unlimited freedom of design.



EASIER TO MAINTAIN

Terraflex is resistant to grease and oil, alkaline moisture and mild acid solutions. It is easy to clean and even caustic soaps which permanently damage other types of resilient floorings will not affect Terraflex—it cannot "wash out." Many different decorative inserts are available to add interest and individuality to floor design. Knife-fork and teakettle inserts are shown above. Moisture-resistant, Terraflex is ideal for laying over radiant-heated concrete floors in direct contact with the ground.



WILL LAST A LIFETIME

Although Terraflex is extremely resilient, it will outwear other types of decorative floor coverings two to one. With its superior flexibility it conforms to uneven surfaces and absorbs the normal floor play. It does not crack, curl, become loose, or brittle, or shrink around the edges. It does not become fuzzy or scratch or lose its sheen from constant wear.

FOR THE BEST there is in flooring—look to Johns-Manville Terraflex.

Send for a free brochure showing the full color line of Johns-Manville Terraflex and Asphalt Tile. Write Johns-Manville, Box 60, New York 16, N. Y.



Johns-Manville

TERRAFLEX AND ASPHALT TILE FLOORING

What's New . . .

Spun Plastic Fabric for Upholstering

A new upholstery fabric has been developed that looks and feels like wool, is virtually stainproof, and is comfortably cool even in hot weather. Known as Spun Boltaflex, the new material combines the appearance of wool with the durability and washability of the toughest saran plastic. It may be cleaned with any kind of soap, detergent or upholstery cleaner, or dry cleaned. The fibers are impervious to moisture, so cannot rot or mildew. Colors are an integral part of the saran fibers and cannot run, wear or rub off. The new material is now available in two contemporary patterns in a variety of colors. **Bolta-Saran, Inc., Dept. CUB, Lawrence, Mass. (Key No. 224)**

Rectangular Jug for Heated Beverages

The No. 1320 Rectangular Beverage Jug is an electrically heated unit with two gallon capacity. It has a thermostat control which protects the unit from burning out in case all liquids are drawn out of the container. It is designed for use in serving hot beverages but hot soups can also be served. The unit plugs into a 110 volt circuit and keeps liquids at 185 degrees.

The jug can also be used for serving cold liquids and ice cream if desired.

For this purpose a stainless steel well is attached to the lid which permits the use of dry or wet ice as a refrigerant



without diluting the contents. **Landers Frary & Clark, Dept. CUB, New Britain, Conn. (Key No. 225)**

Tripod and Wall Screen Has Improved Design

The Da-Lite tripod and wall screen has been further improved for more efficient and easy operation. The push-button operation and fabric lock make it easy to adjust the screen to any desired

height. The newly designed handle facilitates carrying and handling, and there are improved adjustability features for greater efficiency of operation. The wall hangers have been redesigned and the unit is easily adapted for use on a tripod or on the wall.

The "Color Magic" projection surface is crystal-beaded and results in brilliant, clear, true color projection. The screen is readily portable and can be set up easily and quickly. **Da-Lite Screen Co., Inc., Dept. CUB, 2711 N. Pulaski Rd., Chicago 39. (Key No. 226)**

Sound Language Converter Re-Records Magnetically

The new DeVry Magnetic Sound Language Converter is designed to re-record foreign languages magnetically onto films that already contain optical tracks in another language. The unit employs four mixing channels and two sound heads to produce professional re-recording that retains the elements heard on the original optical track. In the case of dialects, a film taken to another part of a country can have the old track quickly erased and replaced by the dialect of the area, using the same film repeatedly. The converter is a self-contained, portable unit. **DeVry Corporation, Dept. CUB, 1111 W. Armitage Ave., Chicago 14. (Key No. 227)**

(Continued on page 92)



with



Save the costly time of your staff hunting lost keys . . . costly lock repairs and replacements . . . at a

saving that will be more than the cost of the system the very first year you own it. Write today!

Attach to your letter-head and mail today

P. O. MOORE, INC., Dept. CUB-11
300 Fourth Ave., New York 10, N. Y.

I would like to have, without obligation, literature describing your product.

Name.....

Address.....

City, State.....

...at the head of **CLASS**

HORNER

ALL
WOOL

ANTI-SHRINK
DORMITORY BLANKETS

with your

SCHOOL EMBLEM

Your school will be justly proud of your own special dormitory blankets by Horner . . . emblazoned with the school's initials or emblem . . . and treated by Horner's exclusive anti-shrink process which reduces blanket shrinkage 83 per cent.



Passenger Blankets — quality-selected to outfit the U.S. United States, America's finest luxury liner.

IN ANY SIZE OR COLOR

write: **HORNER WOOLEN MILLS COMPANY**
EATON RAPIDS, MICHIGAN

NEW

COMPLETE LINE

Model LS-2, with all these advantages, only \$304.50

Easiest operation ever

Fine focus knob in hand-at-rest position • Glide motion focus, drift-free; ball bearings and rollers throughout, for long life • Fingertip-twirl operation of all controls.

Dependable accuracy

Fine focus, with 1-micron divisions • Ball bearing stage, factory centered, graduated in single degrees • Ball bearing nosepiece—identical repeat settings (Centering nosepiece optional at extra cost) • Pre-set polaroid polarizer, with iris diaphragm.

Finest image quality

Entire optical system is dust-proof, including polaroid analyzer and accessory slot • Strain-free, achromatic objectives • Uniform light on full field. Opti-lume Illuminator (optional at slight extra cost)—instantly interchangeable with mirror; use attached or separate. Stage stays cool, even with integral illuminator.

MODEL LI-4

Dustproof Bertrand lens, new centering nosepiece, graduated polarizer.



Booths I-22—I-24

Amer. Assoc. of School Administrators Convention Feb. 13-18, Atlantic City, N. J.



MECHANICAL STAGE

One of many new accessories. Adaptable for point counting.



BAUSCH & LOMB

Dynoptic

POLARIZING MICROSCOPES

FAR MORE MICROSCOPE FOR YOUR MONEY

In this complete new line you'll find time-saving features, convenience advantages never before attainable in a polarizing microscope. Look, for example, at the many benefits you get with the Model LS-2...unequalled in this lowest-price range...exclusive with Bausch & Lomb Polarizing Microscopes, the world's finest.

WRITE for Catalog D-130 and demonstration. Bausch & Lomb Optical Co., 76726 St. Paul St., Rochester 2, New York.

BAUSCH & LOMB



What's New...

Non-Slip Floor Wax Is Self-Polishing

Saf-Flor is a rubber base wax which is self-polishing and non-slip. It is easily applied with a damp mop and requires no rubbing or buffing. It is cleaned with a neutral cleaner and retains its attractive appearance through long use. E. J. Scarry & Co., Dept. CUB, 1620 Market St., Denver 2, Colo. (Key No. 228)

Non-Clogging Dispenser for Powdered Soap



Powdered soap is accurately delivered, with a minimum of waste, with the new non-clogging DeWitt Soapserver. It is attractive in appearance, made of steel with chrome finish and has a sturdy

hinged lid. The dispensing mechanism is protected from water by splashing or condensation and the spiral spring agitator for dispensing prevents packing of contents. The dispenser is easily loaded through large perforations which eliminate the need for locks or keys, yet protect against pilferage. The DeWitt Company, Dept. CUB, 603 Addison St., Chicago 13. (Key No. 229)

Stereoscopic Microscope Has Improved Design

Greater speed, convenience and versatility are claimed for the Model DPG Stereoscopic Microscope. Three design improvements in the new model give it a 180 degree rotating binocular head, a three-way stand and a novel, quick change nosepiece. The rotating binocular head is inclined at a 30 degree angle and turns on a vertical axis to permit either normal or inverted observation. The change is made easily and quickly and the observer handles the specimens without interference from the microscope stand.

The new Model DPG microscope may be used in transmitted light or for bright field and dark field work. The eyepieces provide a wide field of vision. The new microscope is manufactured by the Galileo Company and distributed

in the United States by Opplem Co., Inc., Dept. CUB, 352 Fourth Ave., New York 10. (Key No. 230)

Economy Floor Machine Available in Four Models



All of the features included in the Speedboy Deluxe floor maintenance machines are included in the new utility model known as the Speedboy Special. This is an economy machine which is available in four models, the smallest having a 12 inch brush spread. The new model has Silent-Flo drive and other Advance features for efficient operation. Advance Floor Machine Co., Dept. CUB, 2613 Fourth St. S.E., Minneapolis 14, Minn. (Key No. 231)

(Continued on page 94)

FOR A

Popular Pool

USE

"Bull Frog"
TRADE MARK REG.
U.S. PAT. OFF.
SAF-T-KLENZ

Everyone prefers pools and showers that are clean and sanitary. That's why it's smart to use Bull Frog Saf-T-Klenz, the cleaner that works like magic in removing rust stains, soap oil, lime deposits, body odors that breed and spread infectious germs. Simply sprinkle a little Saf-T-Klenz powder on the damp surface, mop lightly, then rinse with clear water. No hard rubbing required. Odorless. Harmless to hands, clothing, floors and drains. Sold with a guarantee of satisfaction. Liberal free sample on request.

BERMAN CHEMICAL COMPANY

694 SUPERIOR STREET TOLEDO 4, OHIO

☐ Please send free sample of Saf-T-Klenz
☐ Please send quantity prices.

NAME _____
FIRM _____
STREET _____
CITY & STATE _____

No. 5000

New DRAWER BED

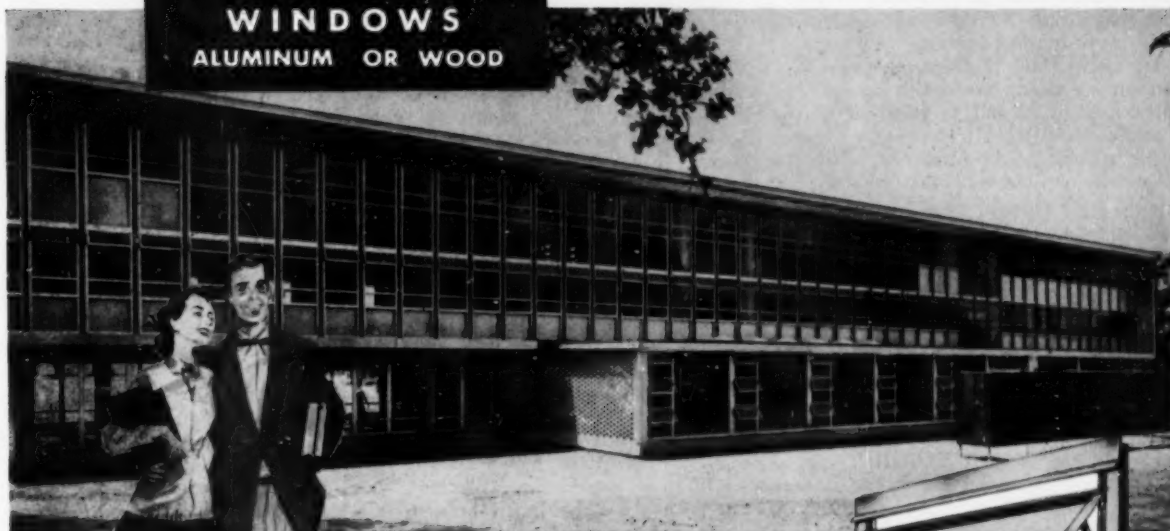
Serves as Bed,
Dresser, Couch

This ingeniously designed piece is ideal for dormitories and small rooms. It has four large drawers — two on each side — perfect for linens, towels, blankets, clothing. Serves as studio couch during day; bed at night. Attractive bookcase-type headboard for holding books, radio, etc., also available. Link fabric springs and mattress can be supplied.

EICHENLAUBS
For Better Furniture

2501 BUTLER ST., PITTSBURGH 1, PA.
ESTABLISHED 1873

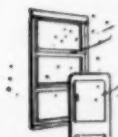
Available in Cherry, Maple, Standish or Walnut Finish. (Other finishes can be supplied.) Height without mattress, 18" length, 76" width, 36" weight, 150 lbs.

LUDMAN**Auto-Lok**
AUTOMATIC LOCKING**WINDOWS**
ALUMINUM OR WOODLaw School Building University of Arkansas,
Fayetteville, Arkansas, Architect, Paul Young, Jr.**For pleasant
classroom****Environment**

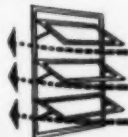
In modern school construction, windows that make maximum use of natural light and natural ventilation, are an important factor in achieving pleasant classroom environment.

Ludman -- world leader in the field of window engineering -- has developed special Auto-Lok windows to help you create this kind of classroom environment. Ludman Auto-Lok windows make it possible for you to enjoy all the advantages of natural light and natural ventilation yet close with a degree of weather tightness unobtainable in any other window. Ludman windows feature the patented Auto-Lok principle of operation that makes them seal tighter than any window made. They close ten times tighter than generally accepted standards . . . seal like a refrigerator. This means your architect can design window-walls of light that take full advantage of light and natural ventilation yet provide weather tight closures. With Auto-Lok windows you can enjoy classroom environment that will be pleasant and an inspiration to students and teachers alike.

For illustrated literature, write --

LUDMAN CorporationDEPT. CUB 2
NORTH MIAMI, FLORIDA

WEATHER TIGHTNESS
The tightest closing window ever made. Patented Auto-Lok design compresses weatherstripping around each sash -- seals it like a refrigerator. "Cold Zones" are eliminated.



DRAFT-FREE VENTILATION
Plenty of fresh air -- even when it rains! Auto-Lok design lets you regulate ventilation for classroom comfort . . . enjoy draft-free air circulation.



EASY TO OPERATE
Auto-Lok's patented principle of operation makes these the easiest of all windows to operate. No effort is required to open or close even the largest window.

LUDMAN LEADS THE WORLD IN WINDOW ENGINEERING

What's New ...

Device for Continuous Tape Recording

A new sound recording and reproducing device is now being made available for general use. It was developed after years of research and used for the past year at Naval air stations. It is an extremely light, compact continuous recording device which is able to record the exact time messages are received, the elapsed time between recordings, and allows fast place-finding without an audible search. The device is capable of delivering 24 and 48 hours of continuous, unattended high quality magnetic recording on either one or two channels of communication simultaneously on a single reel of tape.

Safety controls built into the recorder include a buzzer which sounds in case of power failure, when the machine nears the end of the tape, or if the tape breaks. The instrument plays back recordings instantly when a playback switch is thrown. The device can be used wherever an unmanned uninterrupted listening device is required for long communications, as in recording meetings, surgical procedures, classroom sessions and similar material. The tape can be erased by a bulk demagnetizer and reused indefinitely. The SoundScriber Corporation, Dept. CUB, 146 Munson St., New Haven 4, Conn. (Key No. 232)

Cabinet and Projection Table Offered in New Unit



A new combination cabinet and projection table is available which is easily moved from place to place as needed. The cabinet has a generous storage shelf for films and accessories and a large storage area for the speaker. The projector can be bolted securely to the top for complete safety in moving. The top is of shock resistant plywood and the metal cabinet has a sturdy lock on the door to protect the equipment.

The unit is mounted on large, 3 inch ball-bearing swivel casters for complete

mobility. Two casters are equipped with brakes to ensure stability when the projector is in use. The Safe-Lock Combination Portable Cabinet and Projection Table is 42 inches high and is finished in buff brown baked enamel. Audio-Visual Division, Smith System Heating Co., Dept. CUB, 212 Ontario St. S.E., Minneapolis 14, Minn. (Key No. 233)

Quick Drying Latex Paint for Interiors

A new low priced latex paint for interior surfaces has no chemical odor. Painting can go on in rooms and corridors adjoining those which are occupied, without discomfort from odors. It is fire retardant to applied surfaces, non-inflammable and non-toxic. The paint dries quickly so that when needed a second coat can be applied in three hours. No priming is required since the primer is built into the paint which is low in cost and has high hiding power. It is available in non-yellowing white with nine tint colors for mixing a wide variety of shades. The paint covers in a single coat, dries to a hard, smooth finish which can be washed, and gives a durable surface even over new plaster. F. O. Pierce Co., Dept. CUB, 2-33 50th Ave., Long Island City 1, N.Y. (Key No. 234)

(Continued on page 96)

No. 315 UNIVERSITY TABLET ARM CHAIR.

Ideal for class
or lecture room



DESIGNED
FOR
VALUE!



- Solid hard maple seat—saddled for comfort.
- Large solid maple tablet arm—in proper writing position.
- Heavy cast metal pedestal—non-flexing—stays put.
- Available with underseat bookrack.
- Suntan color—finished in tough scratch resistant "Celsyn".
- Available with Fibresin plastic tablet arm

"No One Ever Regretted Buying Quality"

PEABODY SEATING COMPANY, INC.
NORTH MANCHESTER INDIANA

DOLCOWAX for BEAUTIFUL FLOORS

DOLCOWAX premium-quality floor wax is sold with the guarantee that, regardless of price, *no competing floor emulsion wax will outwear it!* Easily applied, DOLCOWAX leaves a beautiful, lustrous film, hard and durable, which actually *improves* in lustre under foot traffic.

GROWS BRIGHTER
UNDER TRAFFIC!



For **FREE**
SANITARY SURVEY
of Your Premises
consult your
DOLGE SERVICE MAN

DOLGE has a floor finish for every specific purpose. If you have a special floor maintenance problem, your Dolge Service Man will gladly demonstrate the correct finish. No obligation, of course.

Dependable
DOLGE
WESTPORT, CONNECTICUT

NATIONAL
SALES
SLANTS

DEMAND DOLLAR FOR DOLLAR VALUE

BUY VUL-COT.

The National Quality Waste Basket

This suggestion isn't made without sound reason. The VUL-COT line has so much more to offer. VUL-COT construction is all-hard vulcanized fibre providing a handsome finish. It's extremely durable, light in weight, easy to clean and handle.

You buy these features when you buy VUL-COT

Color is part of the fibre—it can't chip-off, wear-off, or stain.

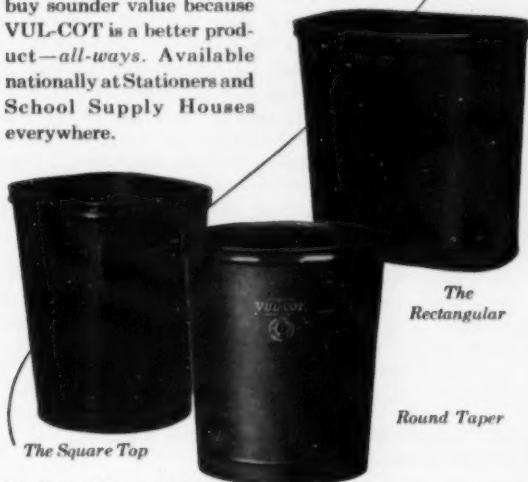
Double rolled top won't break, loosen, or fray. Remains smooth and round for the life of the basket.

Exclusive bonded seam construction adds strength and provides a permanent leak-proof seal.

Available in 5 basic models—in a variety of sizes.

VUL-COTS are guaranteed not to crack—splinter—dent—rust—or corrode.

If you buy waste-baskets—**BUY VUL-COT.** You'll buy sounder value because VUL-COT is a better product—all-ways. Available nationally at Stationers and School Supply Houses everywhere.



The Square Top

The Rectangular

Round Taper

Write direct for catalog price sheet. Dept. U-2.

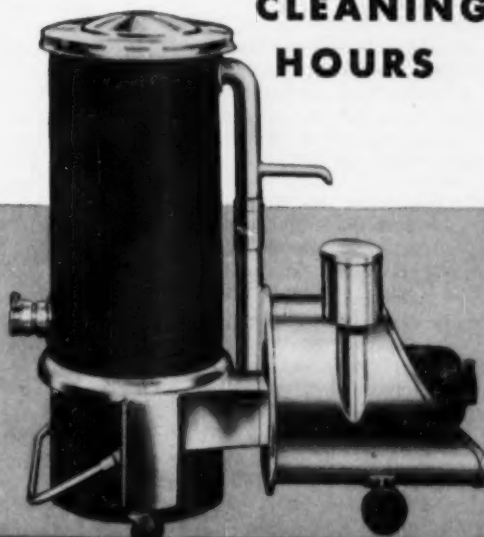


NATIONAL
VULCANIZED FIBRE CO.
WILMINGTON 99, DELAWARE

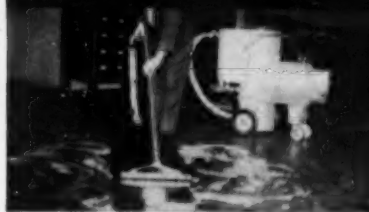
Vol. 16, No. 2, February 1954

SPENCERS'

GREATER VACUUM POWER
MAKES THE MOST OF
CLEANING
HOURS

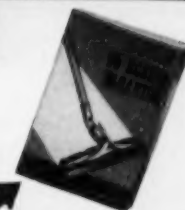


Designed and built for professional cleaning by the country's foremost vacuum cleaning experts. Spencer Portables, by actual test, pick up 6 times as much dirt as manual sweeping and in less time! To get the most out of your cleaning hours, give the operator an easy-to-use, powerful, efficient Spencer. You'll see the difference.



EFFICIENT
WET CLEANING
SAVES TIME

SEND FOR 32 PAGES
OF HINTS ON EFFICIENT
CLEANING



18P84

THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT

ADDRESS
DEPT. CU

SPENCER
HARTFORD

Please send my copy of A GUIDE TO EASIER CLEANING

Name
Street & No.
City & State

PRODUCT INFORMATION

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TO REQUEST PRODUCT INFORMATION

FOLD THIS FLAP OUT

AND USE THESE CARDS

(We pay the postage)

The two cards below are detachable and are addressed to us. With this flap folded out you can turn through the magazine for the items on which you want further information.

When, in either an advertisement or "What's New" you locate the product, turn to the index to advertisements (left) or to the index of "What's New" items on the following page where you will find the key number for the item. Items advertised are listed alphabetically by manufacturer. "What's New" items are in Key Number order. Circle the corresponding key number on the card below for each item in which you are interested. The second card is for the use of someone else who may also want product data.

Detach and mail — no postage required.

February, 1954

Please ask the manufacturers, indicated by the numbers I have circled, to send further literature and information provided there is no charge or obligation.

WHAT'S NEW							ADVERTISEMENTS												
201	202	203	204	205	206	207	1	2	5	7	8, 9	10, 11	12	13					
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NAME		TITLE	
INSTITUTION			
ADDRESS	CITY	ZONE	STATE

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Detach and mail — no postage required.



FIRST CLASS
CHICAGO, ILL.
PERMIT NO. 136
SEC. 34.9 P. L. & R.

BUSINESS REPLY CARD
No Postage Stamp Necessary if mailed in the United States

3 CENT POSTAGE WILL BE PAID BY

COLLEGE AND UNIVERSITY BUSINESS

919 NORTH MICHIGAN AVENUE

CHICAGO 11, ILLINOIS



FIRST CLASS
CHICAGO, ILL.
PERMIT NO. 136
SEC. 34.9 P. L. & R.

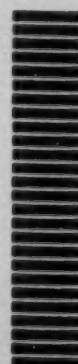
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Key

201 Classroom Art
Mayline Co

202 Rubber Cover
W. J. Voit

203 Magazine Disp
Holverson S

204 Fiberglass Pan
Alsynite Co

205 Three Way Sh
Luther O. L

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Society for

207 Scotsman Sup
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208 Polished Misc
Mississippi

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What's New . . .

Product Literature

- A new 12 page booklet tells the story of **Laykold Tennis Courts**. Prepared by American Bitumuls & Asphalt Co., 200 Bush St., San Francisco 4, Calif., the booklet is printed in full color and is designed for use by educators in planning courts. It is illustrated with color photographs of typical school, college and university installations and gives information concerning basic types and styles of all-weather Laykold and Grass-text courts. A section on cost, maintenance, resurfacing and player acceptance is included. (Key No. 235)
- The actual colors of "Color Chalkboards and Cork Bulletin Boards" developed by Son-Nel Products Co., 10222 Pearmain St., Oakland, Calif., are shown in a new folder which tells the story of this interesting development. Bright, attractive classrooms, which avoid the dullness of uniformity, can be planned with the colors available, which include blue, coral, sage green, mauve brown, spruce green and russet brown. Each color was developed after intensive research and all shades fall within the proper color reflection limits to assure perfect readability. Information is given on the durable writing surface which is constructed to stand up through years of hard service. The chalkboards are available in three quality grades, each of which is described in the folder. Information is also given on colored bulletin corkboards, map and display rails and Perma-Panels, a chalkboard and corkboard unit. (Key No. 236)
- **Extendoor, "The Folding Door With the Extendible X,"** is discussed in an attractively laid out and printed folder recently received from Extendoor, Incorporated, Muskegon, Mich. Where these smooth, quiet, easily moved folding doors can be used advantageously is shown in a series of photographs. Methods of installation and mechanical accessories are not only described but line drawings illustrate each point covered. Full specifications are included as is information on Extendoor Hardware. (Key No. 227)
- A series of booklets has been prepared by Otis Elevator Co., 260 Eleventh Ave., New York 1, on the subject of "Otis Autotronic Elevating." One booklet discusses this new automatic electronic system with or without attendant, a second booklet discusses the use without attendant, and a third is a reprint of a talk by Emmett W. Hines, Vice-President of Otis Elevator Company, on the response of management and the public to the operatorless elevator. How traffic programs are handled and a simplified explanation of this modern, efficient system are some of the points discussed in the booklets. (Key No. 238)
- The importance of good floors in institutions and other public buildings is discussed in a 20 page booklet on "Floors" published by the Monroe Company, Inc., 10703 Quebec Ave., Cleveland 6, Ohio. The brochure is the result of many years of Monroe research in flooring problems and contains a sample of a floor analysis form to assist maintenance men in determining floor requirements. (Key No. 239)
- A new **Portion Costolator Catalog** has been issued by the Food Specialties Division of Pfaltzer Brothers, Inc., 939 W. 37th Place, Chicago 9. The 20 page booklet contains menu ideas, serving suggestions and approximate costs per ounce and per serving, showing how to control portion costs. Complete product information on the company's line of soups, soup bases, prepared entrees, canned foods and miscellaneous food specialties is included. (Key No. 240)
- A color chart which shows the seven new colors recently added to the line of **Vina-Lux Reenforced Vinyl Tile**, and which pictures all patterns now available in this line, is a part of a folder recently published by Uvalde Rock Asphalt Co., P. O. Box 531, San Antonio 6, Tex. Descriptive information on this flexible, smooth surfaced floor tile is included. (Key No. 241)
- A new folder on "Foamglas, The Long-Life, All-Temperature Pipe Insulation," has been prepared by Pittsburgh Corning Corp., 1 Gateway Center, Pittsburgh 22, Pa. The folder is illustrated by job installation photographs and by drawings of the product and its installation. (Key No. 242)
- A catalog on the use of "Equipment For the Control of Natural Light" in institutions and other buildings has been released by Lemlar Manufacturing Co., 715 W. Redondo Beach Blvd., Los Angeles, Calif. The use of horizontal and vertical jealousies and venetian awnings for daylight engineering is discussed in the leaflet which carries illustrations of installations in medical and educational institutions as well as commercial buildings and residences. Line drawings illustrate the principles of daylight engineering and there is a page devoted to the use of Type AF Awnings for schools. (Key No. 243)
- "Approved Maintenance Methods for Rubber Floors" is the title of a folder prepared by the Rubber Flooring Division, The Rubber Manufacturers Association, Inc., 444 Madison Ave., New York 22. Detailed instructions on how to clean and wax rubber floors are given, together with lists of cleaners and waxes which have been tested and found to meet the specifications set up by the Association. (Key No. 244)
- Special sections on planning and equipping libraries with actual installation photographs are contained in a new booklet, **LB 604**, issued by Remington Rand Inc., 315 Fourth Ave., New York 10. The 64 page catalog contains 175 illustrations of new equipment and recent installations with complete descriptive information on the new Trend Functional Library Furniture developed by the company. (Key No. 245)
- Designed to serve as a guide to answer the questions of those who realize the need for electric generating plants, the **Blue Book on Electric Generating Plants** has been prepared by D. W. Onan & Sons Inc., 2600 University Ave. S.E., Minneapolis 14, Minn. The booklet is pocket sized and tells the story of electric plant development from the early years when storage batteries were necessary to the present modern single-unit, engine-generator power plants. The three general groups of electric plants are described in simple non-technical language and operation of each type is discussed. Cost of operation of gasoline engine, Diesel engine and gas engine types is discussed together with other general information. (Key No. 246)
- Specifications on **Joseph Goder Disposalls** of all sizes are given in a folder issued by Joseph Goder Incinerators, 5121 N. Ravenswood Ave., Chicago 40. These incinerators, for heavy duty use in handling all types of refuse including garbage, rubbish, trash and pathological waste, are described in the folder which stresses their use in hospitals, schools and other institutions. (Key No. 247)
- Covering the complete line of "Blakeslee-Built Dish and Glass Washing Machines" is a new folder issued by G. S. Blakeslee & Co., 1844 S. Laramie Ave., Chicago 50. Complete and informative description on this equipment for institutional kitchens is given and each Blakeslee dish and glasswashing machine is pictured and its working parts shown in line drawings illustrating the principles of operation. (Key No. 248)
- Thirty-two different types of trucks for easy and safe handling of various types of materials are described in the new pocket sized **Booklet 53-S** issued by Nutting Truck and Caster Co., Inc., Faribault, Minn. Specifications on the trucks are supplemented with how-to-use information. (Key No. 249)
- The beauty, efficiency and flexibility of **Peerlite, the "Modern Air Cooled Fluorescent Fixture,"** are discussed in a new 8 page booklet issued by the Edwin F. Guth Company, 2615 Washington Blvd., St. Louis 3, Mo. Complete engineering data and dimensions on this fluorescent fixture are included in the catalog. (Key No. 250)

750 hours in use...

**no
sign
of wear!**



*New Filmosound Specialist
with Sapphire jewel parts
cuts maintenance costs!*

Television station WSPD-TV in Toledo, Ohio, started using the heavy-duty Filmosound Specialist 16mm recording projector on November 6, 1952. Twenty-four weeks later—after 1,584,000 feet of film had been shown with this Specialist—Bell & Howell examined it to detect any signs of wear. Even under a magnifying glass not a single worn spot was visible on the critical film-handling parts!

Wear on the critical parts (shuttle, guide rail, and film tension clips) of a projector causes picture unsteadiness and costly maintenance. But the sapphire jewels in the Filmosound Specialist protect these critical parts... ensure clear, easy-to-watch movies... give the Specialist 400% longer life than an ordinary projector!

To meet your particular 16mm projection needs, many more exclusive features may be added to the basic unit. Filmosound Specialists are sold exclusively by your Bell & Howell Special Representative. Mail coupon for full information.

Bell & Howell

makers of the

world's finest motion picture equipment

*Filmosound Specialists are available in both
standard sound and magnetic recording models.*



Bell & Howell Company, Dept. B
7192 McCormick Road
Chicago 45, Illinois

Please send me, without cost or obligation, complete information on the Filmosound Specialist and the name of my Bell & Howell Special Representative.

Name

Organization

Address

City

County State

*Here's new high-speed performance
and operating ease to reduce
your accounting costs -*

**IT DOES THESE JOBS
—AND MORE!**

Budgetary Accounting
Cost Records • Expenditure
and Revenue Distribution
General Ledger
Student Accounts • Payrolls
Store Records
Governmental Reports

Burroughs Sensimatic
ACCOUNTING MACHINES

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